VX3X User's Guide

Converted to Web-based delivery

LXE

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E-EQ-VX3XOGWW-E

JAVA POWERED

Microsoft Windows Embedded

LANGUAGE: ENGLISH

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Revision Notice

VX3X User's Guide
Upgrade From Revision D to Revision E

Section	Explanation
Multi Application AppLock	Clarified launched vs. available applications.
Accessories	Revised accessories listing.

Note: A complete revision history is included in Appendix B, "Regulatory Notices and Safety Information".

Table of Contents

THE VX3X VEHICLE MOUNT COMPUTER 1

Introduction 1
- Identifying the VX3X Computer 2
- Document Conventions 3
- Environmental Specifications 3

Quick Start 4
- Troubleshooting 5

Components 6

Microsoft Windows CE Control Panel 8

The Half-Screen Display 8

AppLock and the VX3X 9
- Single Application AppLock 9
- Multi Application AppLock 9
  - Using the Touchscreen 9
  - Using the Keypad 10

The QWERTY Keyboard 11
- IBM 3270 Overlay 11
- IBM 5250 Overlay 11
- Key Functions 12
- CAPS Key and CapsLock Mode 13
- Keypad Shortcuts 13
- Keypress Sequences 13
- Custom Key Maps 13
- LED Functions 14
- General Windows CE Keyboard Shortcuts 15
- Input Panel (Virtual Keyboard) 16
  - Enabling the Input Panel 16

Power Supply 17
- Backup Battery 17

Getting Help 18

Manuals and Accessories 18
- Manuals 18
- Accessories 18

INSTALLATION 21

Install Mounting Brackets 21
RAM Mount System 22
Components 22
Torque Measurements 22
Procedure 23
Step 1 – Mount Vehicle RAM Clamp Mount 23
Mounting Dimensions 24
Step 2 – Attach RAM Mount Ball to the VX3X 25
Step 3 – Attach VX3X Assembly to RAM Mount 26
Completed Assembly 26
Strain Relief Cable Clamps 27
Install Stylus Tether and Sleeve (Optional) 28
Install/Remove Touchscreen Protective Film Optional) 28
Connect Serial Barcode Scanner 29
Connect Serial Printer or PC 31
USB-C Port 32
USB-H Port 33
Connect External Headset 34
LXE Headsets 34
Other Headsets 35
Connect Antenna 36
Connect Power Cable 36
External Power Supply, Optional 37
Vehicle 12-80VDC Power Connection 38

OPERATION 41

Power Button 41
Power Management 41
Restart Sequence 41
Display and Touchscreen 42
Set the Display Contrast 42
Set the Display Backlight Timer 42
Set the Display Brightness 42
Cleaning the Display 43
Disabling the Touchscreen 43
Calibrating the Touchscreen 43
Touchscreen Protective Film 43
Adjust Speaker Volume 44

Using the Keypad 44
Using the Touchscreen 44
Microsoft Windows CE Event Sounds 44
Laser Barcode Scanner Warnings 45
Enter Data 45
Keyboard Entry 46
Touchscreen Entry 46
Right Click 46
Tethered Scanner Entry 47
Aiming the Barcode Scanner 47
Distance from Label 47
Successful Scan 47
Unsuccessful Scan 47
Bluetooth Scanners 48
Voice Data 48
Bluetooth Devices 49

APPENDIX A KEY MAPS 51

The VX3X Keypad 51
Key Map 101-Key Equivalencies 51
IBM 3270 Keypad Overlay 56
IBM 5250 Keypad Overlay 56

APPENDIX B REGULATORY NOTICES AND SAFETY INFORMATION 57

Approvals 58
Revision History 63

INDEX 65

Illustrations

Figure 1 VX3X Components, Top View 6
Figure 2 VX3X Components, Front View 6
Figure 3 VX3X Components, Back View 7
Figure 23 Switchpad Menu 9
Figure 5 QWERTY Keyboard Standard Overlay 11
Figure 6 QWERTY Keyboard with IBM 3270 Overlay 11
Figure 7 QWERTY Keyboard with IBM 5250 Overlay 11
Figure 8 LED Functions 14
Figure 9 Small and Large Virtual Keyboards 16
Figure 10 RAM Clamp Mount Components 23
Figure 11 Assembled RAM Clamp Mount 23
Figure 12 RAM Clamp Mount - Mounting Dimensions (Not To Scale) 24
Figure 13 Attach RAM Mount to VX3X 25
Figure 14 RAM Assembly 26
Figure 15 Completed RAM Mount Assembly 26
Figure 14 Strain Relief Cable Clamps 27
Figure 14 Slide Clamp Over Cable 27
Figure 16 Connect Serial Scanner Cable 29
Figure 17 VX3X with Generic Barcode Scanner Attached 30
Figure 18 Generic Barcode Scanner 30
Figure 19 Connect Serial Cable to COM3 31
Figure 20 Connect USB-C Cable 32
Figure 21 Connect USB-H Cable 33
Figure 22 Connect External Headset 34
Figure 23 Headset Adapter Cable Components 34
Figure 24 Headset Quick Disconnect Connector 35
Figure 25 Connect Power Cable to VX3X 36
Figure 26 Optional Power Configuration 37
Figure 27 Vehicle Power Connection Cable (Fuse Not Shown) 38
Figure 28 Connecting the Power Cable to the Vehicle 38
Figure 29 Vehicle Connection Wiring Color Codes 39
Figure 30 Location of the Power (PWR) Button 41
Figure 31 Touchscreen Calibration, Calibration Targets 43
Figure 32 Caution Labels Class II Scanner 45
Figure 33 Caution Labels Class IIIA Scanner 45
Figure 34 Scan Beam 47
Figure 35 VX3X QWERTY Keyboard 51
Figure 36 IBM 3270 Specific Keypad 56
Figure 37 IBM 5250 Specific Keypad 56

The VX3X Vehicle Mount Computer

Introduction

The VX3X Vehicle Mount Computer (VMC) is a rugged, vehicle-mounted, Microsoft® Windows® CE equipped computer. The VX3X is capable of wireless data communications from a fork-lift truck or any properly configured vehicle. The unit uses an 802.11radio for wireless data communications.

The mobile device is horizontally oriented and features backlighting for the display. The touch-screen display supports graphic features and Windows CE icons that the Windows CE operating system supports. The keys on the keypad are constructed of a phosphorescent material that can easily be seen in dimly lighted areas.

The VX3X provides the power and functionality of a desktop computer in a vehicle mounted unit, with a wide range of options:

- 400MHz Intel® PXA255 CPU
- Windows CE .NET or CE 5.0 Operating System
- Wireless LAN radios with internal antenna or external remote mount antenna
- USB Client port
- Available touch screen protective film
- Available Bluetooth® module supports LXE Bluetooth printers and scanners.
- Available RAM Mount™

Note: The "VX3X Reference Guide" contains VX3X technical information and advanced functions.

Identifying the VX3X Computer

VX3X

The VX3X is identified by the “VX3X” logo located above the keypad.

The VX3X is covered in this document and the *VX3X Reference Guide*.

VX3Plus

The VX3Plus is identified by the “VX3Plus” logo located at the bottom right of the keypad.

The VX3Plus *is not* covered in this document. Please refer to the *VX3Plus User’s Guide* and the *VX3Plus Reference Guide* for information on the VX3X.

Document Conventions

This reference guide uses the following document conventions:

ALL CAPS	All caps are used to represent disk directories, file names, and application names.
Menu|Choice	Rather than use the phrase "choose the **Save** command from the **File** menu", this manual uses the convention "choose **File|Save**".
"Quotes"	Indicates the title of a book, chapter or a section within a chapter (for example, "Document Conventions").
< >	Indicates a key on the keyboard (for example, <Enter>).
	Indicates a reference to other documentation.
	Differences in operation or commands due to radio type.
ATTENTION	Keyword that indicates vital or pivotal information to follow.
	Attention symbol that indicates vital or pivotal information to follow. Also, when marked on product, means to refer to the manual or operator's guide.
	International fuse replacement symbol. When marked on the product, the label includes fuse ratings in volts (v) and amperes (a) for the product.
Note:	Keyword that indicates immediately relevant information.
Caution	Keyword that indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury.
WARNING	Keyword that indicates a potentially hazardous situation, which, if not avoided, could result in death or serious injury.
DANGER	Keyword that indicates an imminent hazardous situation, which, if not avoided, will result in death or serious injury.

Environmental Specifications

Operating Temperature	14°F to 122°F (-10°C to 50°C) [non-condensing]
Storage Temperature	-22°F to 158°F (-30°C to 70°C) [non-condensing]
Operating Humidity	5% to 95% non-condensing at 104°F (40°C)
Vibration	Based on MIL Std 810D
ESD	8 kV air, 4kV contact
Shock	75G, 5ms duration, 100 shock impacts
Bluetooth Range	32.8 feet (10 meters) Direct line of sight only.

Quick Start

This section's instructions are based on the assumption that your new system is pre-configured and requires only accessory installation and a power source.

Use this guide as you would any other source book -- reading portions to learn about the VX3X, and then referring to it when you need more information about a particular subject. This guide takes you through installation and operation of the LXE VX3X.

In general, the sequence of events is:

1. Install RAM ball on back of VX3X. Install Vehicle Mounting Bracket on vehicle and secure VX3X in Mounting Bracket Assembly (see "Installation", later in this manual).
2. Connect power cable to the VX3X. If using DC power, please refer to "Vehicle 12-80VDC Power Connection", later in this manual, for instructions, warnings and fuse information.
3. Connect accessories to VX3X, e.g. scanner, etc.
4. Secure all cables to the VX3X with the Strain Relief Cable Clamps.
5. Turn the VX3X on.
6. When instructed, calibrate the touchscreen.
7. The screen may appear white while applications and drivers are loading. When complete, set Date and Time (see the "VX3X Reference Guide").
8. Configure radio (see the "VX3X Reference Guide").
9. Warmboot to ensure all registry settings are saved.
10. Device is ready for use.

The VX3X should be mounted in an area in the vehicle where it:

- Does not obstruct the vehicle driver's vision or safe vehicle operation.
- Can be easily accessed by anyone seated in the driver's seat.

	If your VX3X has AppLock installed, please contact your system administrator for setup and processing information. AppLock is configured by an administrator to limit general users to only certain programs.

Troubleshooting

Can't calibrate the touch screen, change the date/time or adjust the volume.	AppLock is installed and running on the mobile device. AppLock restricts User access to running programs. Changes or modifications require Administrator access. Refer to AppLock in the *VX3X Reference Guide* for setup and processing information.
RFterm opens and runs upon each cold reset and warm reset.	Tap **File | Exit** to close the RFTerm application.
The VX3X seems to lockup as soon as it is warm booted.	There may be small delays while the wireless client connects to the network, authorization for Voxware-enabled applications complete, Wavelink Avalanche management of the VX3X startup completes, and Bluetooth relationships establish or re-establish.

Components

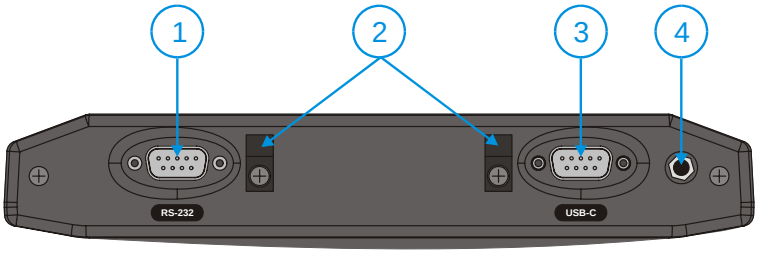


Figure 1 VX3X Components, Top View

1 Left Port
2 Strain Relief Clamps
3 Right Port
4 Audio or Antenna Connector (Audio Connector shown)

The following combinations are offered for the VX3X Endcap

Left Port	Right Port
COM3 (RS-232)	USB-Client (USB-C)
COM3 (RS-232)	COM1 (RS-232)
USB-Host (USB-H)	COM1 (RS-232)
USB-Host (USB-H)	USB-Client (USB-C)

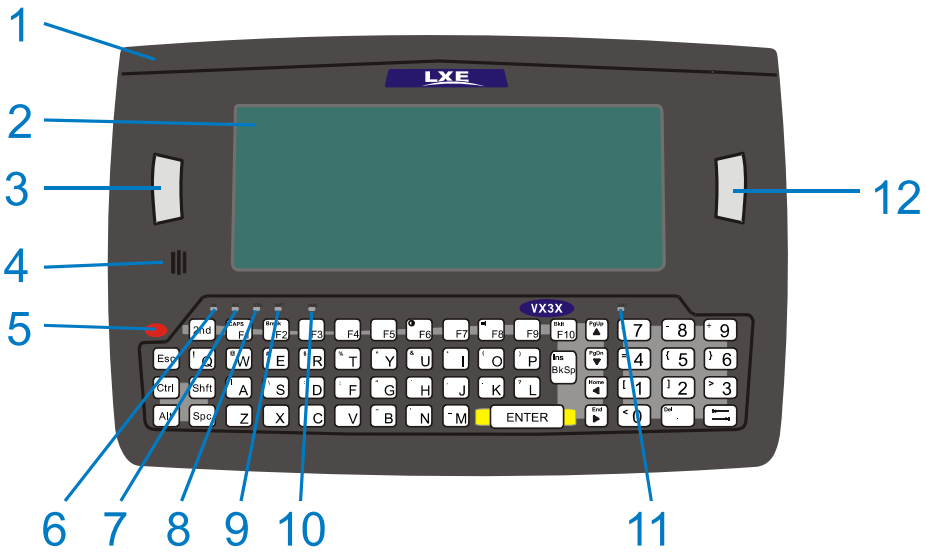


Figure 2 VX3X Components, Front View

1 Endcap
2 Display
3 Programmable Key
4 Beeper
5 On/Off Button
6 2nd LED
7 Alt LED
8 Ctrl LED
9 Shift LED
10 Caps LED
11 Status LED
12 Programmable Key

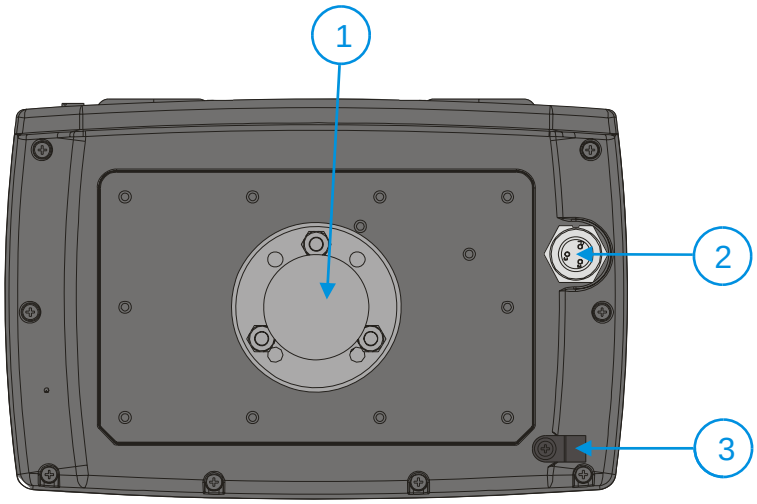


Figure 3 VX3X Components, Back View

1 RAM Ball
2 Power Connector
3 Strain Relief Clamp

Note: The RAM ball shown above is shipped unattached. The installer must assemble the RAM ball to the back of the VX3X. See "Installation" later in this manual for details.

Microsoft Windows CE Control Panel

The Microsoft Windows CE Control Panel provides standard Windows CE options for configuring the VX3X, such as:

- Sounds and volume control
- Display configuration (including backlight power management)

Please consult your System Administrator or refer to commercially available Microsoft Windows CE user guides or the on-line Help application for these standard configuration options.

The Half-Screen Display

The VX3X has a half screen transmissive LCD color display capable of supporting VGA graphics mode. The resolution is 640 x 240 pixels.

AppLock and the VX3X

AppLock may be installed and running on the mobile device. AppLock restricts access to programs and the Windows CE Control Panel. Please contact your system administrator for details.

Single Application AppLock

Single application AppLock restricts a user to one application. The user is unable to exit the application (or if the application exits, it immediately restarts).

Note: Single application AppLock is obsolete. Please contact your LXE representative if you desire to upgrade to multi application AppLock.

Multi Application AppLock

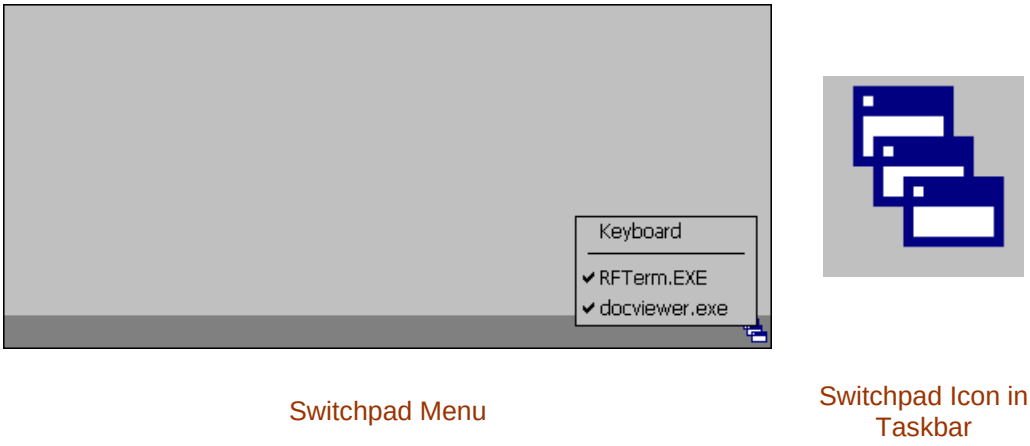


Figure 4 Switchpad Menu

A checkmark indicates applications currently active. Applications without a checkmark are available for Launching by the user. When Keyboard is selected, the VX3X default input method (Input Panel, Transcriber, or custom input method) is activated.

Note: If "Keyboard" is not present in the window, an older version of AppLock is installed. Please contact your LXE representative for upgrade information, if desired.

Using the Touchscreen

Note: The touch screen must be enabled.

When the mobile device enters end-user mode, a Switchpad icon (it looks like three tiny windows one above the other) is displayed in the taskbar. The taskbar is always visible on top of the application in focus.

When the user taps the Switchpad icon, a menu is displayed showing the applications available to the user. The user can tap an application name in the popup menu and the selected application is brought to the foreground. The previous application continues to run in the background. Stylus taps affect the application in focus only. When the user needs to use the Input Panel, they tap the Keyboard option. Input Panel taps affect the application in focus only.

The figure shown above is an example and is shown only to aid in describing how the user can switch between applications using a stylus.

Using the Keypad

One switch key sequence (or hotkey) is defined by the administrator for the end-user to use when switching between locked applications. This is known as the **Activation key**. When the switch key sequence is pressed on the keypad, the next application in the AppLock configuration is moved to the foreground and the previous application moves to the background. The previous application continues to run in the background. End-user key presses affect the application in focus only.

See the *VX3X Reference Guide* for AppLock setup instruction.

The QWERTY Keyboard

The VX3X has a QWERTY keyboard, available with a standard ANSI overlay, an IBM 3270 overlay or an IBM 5250 overlay. These keyboards have 101 keyboard functions, including a numeric keypad. Please refer to Appendix A, "Key Maps", for keypress combinations.

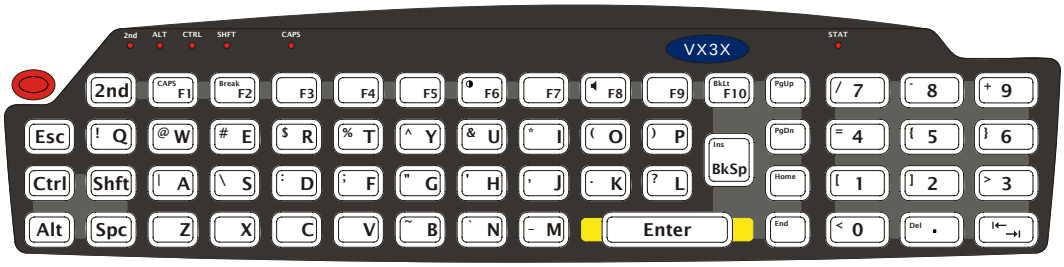


Figure 5 QWERTY Keyboard Standard Overlay

IBM 3270 Overlay

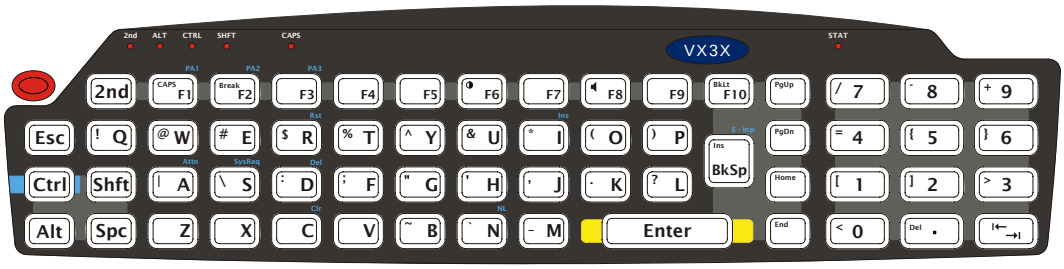


Figure 6 QWERTY Keyboard with IBM 3270 Overlay

IBM 5250 Overlay

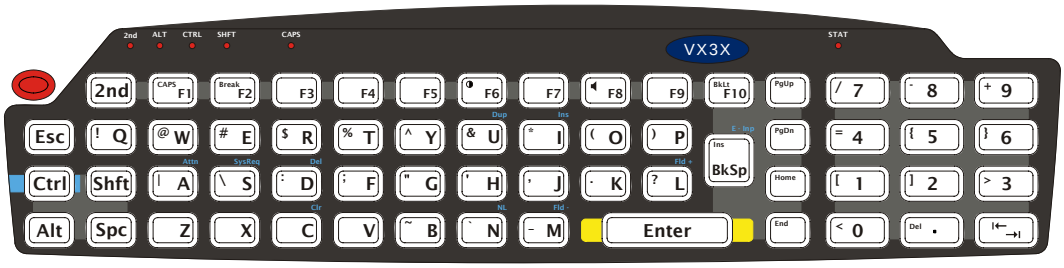


Figure 7 QWERTY Keyboard with IBM 5250 Overlay

Note: Press the <CTRL> + <Enter> keys to initiate the IBM 5250 Field Exit Function.

Key Functions

Key	Function
Programmable	For information on programming these keys, please refer to the "VX3X Reference Guide". By default, these keys function as Enter keys, except for IBM 5250 configurations where the left button is configured as "Field Exit".
Enter	The Enter key is used to confirm a form entry or to transmit information. How it is used is determined by the application running on the computer.
2nd	The 2nd key is used to activate the 2nd functions of the keypad. Printed on many keys at the upper left corner are small characters that represent the 2nd function of that key. Using the 2nd key activates the second key function. Note that the 2nd key only stays active for one keystroke. Each time you need to use the 2nd function you must press the 2nd key. To cancel a 2nd function before pressing another key, press the 2nd key again. When the 2nd function is active, the 2nd LED illuminates.
Ctrl	The Ctrl key enables the control functions of the keypad. This function is similar to a regular keyboard's Control key. Note that the Ctrl key only stays active for one keystroke. Each time you need to use a Ctrl function, you need to press the Ctrl key before pressing the desired key. When the Ctrl function is active, the Ctrl LED illuminates.
Alt	The Alt key enables the alternate functions of the keypad. This function is similar to a regular keyboard's Alt key. Note that the Alt key only stays active for one keystroke. Each time you need to use an alternate function, you need to press the Alt key before pressing the desired key. When the Alt function is active, the Alt LED illuminates.
Shft	The Shft key enables the shifted functions of the keypad. This function is similar to a regular keyboard's Shift key. Note that the Shift key only stays active for one keystroke. Each time you need to use a Shifted function, you need to press the Shft key before pressing the desired key. When the Shft function is active, the Shft LED illuminates. When the Shft key is pressed the next key is determined by the major key legends, i.e., the alpha keys display lower case letters – when CAPS is On alpha characters are capitalized. For example, when CAPS is on and the Shft key and the G key are pressed, a lower case g is displayed.
Spc	The Spc key adds a space to the line of data on the display. This function is similar to a regular keyboard's Spacebar. Note that the Spc key only stays active for one keystroke.

CAPS Key and CapsLock Mode

This function is similar to a regular keyboard's CapsLock key. Note that the CAPS mode stays active until the CAPS key sequence is pressed again. Each time you need to use a Caps function, you need to press the CAPS key sequence first. To cancel a Caps function press the CAPS key sequence again. When the Caps mode is active, the Caps LED illuminates.

The CAPS key sequence is 2^{nd} + F1.

- No CAPS AND No Shift keypress – result is a lowercase letter.
- CAPS OR Shift – result is an uppercase letter.
- CAPS AND Shift keypress – result is a lowercase letter.

For information on preserving Caps configuration after a reboot, please see refer to the "VX3X Reference Guide".

Keypad Shortcuts

Use keyboard shortcuts instead of the stylus:

- Press Tab and an Arrow key to select a file.
- Press Shift and an Arrow key to select several files.
- Once you've selected a file, press Alt then press Enter to open its Properties dialog.
- Press 2nd then press numeric dot to delete a file.
- To force the Start menu to display, press Ctrl then press Esc.

Keypress Sequences

See Appendix A for all key press sequences.

Custom Key Maps

The System Administrator can create custom key maps. Details are in the *VX3X Reference Guide*.

LED Functions

Figure 8 LED Functions

Across the top of the keypad are LEDs that provide visual cues to current computer operation. When the LED is not illuminated, the function is inactive.

LED	When illuminated ...
2nd	The next keypress is a 2nd keypress. • Amber when on • Blinks amber during configuration key sequence.
ALT	The next keypress is an ALT keypress. • Amber when on and unlit when off.
CTRL	The next keypress is a CTRL keypress. • Amber when on and unlit when off.
SHFT	The next letter is the uppercase letter on alpha keys and the shifted character on the numeric keypad keys. • Amber when on and unlit when off.
CAPS	Uppercase letters are active until the CAPS key sequence is pressed again. • Amber when on and unlit when off.
STAT	Status Indicator. • Amber when device is booting up. • Blinking Green when display Suspend state begins.

General Windows CE Keyboard Shortcuts

Use the keyboard shortcuts in the chart below to navigate with the VX3X keyboard. These are standard keyboard shortcuts for Windows CE applications.

Press these keys …	To …
CTRL + C	Copy
CTRL + X	Cut
CTRL + V	Paste
CTRL + Z	Undo
DELETE	Delete
SHIFT with any of the arrow keys	Select more than one item in a window or on the desktop, or select text within a document.
CTRL+A	Select all.
ALT+ESC	Cycle through items in the order they were opened.
CTRL+ESC	Display the Start menu.
ALT+Underlined letter in a menu name	Display the corresponding menu.
Underlined letter in a command name on an open menu	Carry out the corresponding command.
ESC	Cancel the current task.

The touchscreen provides equivalent functionality to a mouse:

- A touch on the touchscreen is equivalent to a left mouse click.
- Many items can be moved by the "drag and drop" method, touching the desired item, moving the stylus across the screen and releasing the stylus in the desired location.
- A double stylus tap is equivalent to a double click.
- A touch and hold is equivalent to a right mouse click.

Input Panel (Virtual Keyboard)

The Input Panel may be enabled via the Input Panel icon in the Windows CE Control Panel. The Input Panel can be displayed as a large or small keyboard.

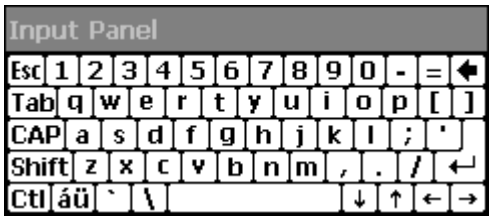


Figure 9 Virtual Keyboard

Virtual keyboards display the actual character a keypress results in. For example, pressing the <Shift> key on the virtual keyboard toggles the characters displayed on the keys between upper and lower case. The <áü> key toggles the keys between standard and international symbols. The <Shift> and <áü> keys can be used in combination for capitalized international characters.

Note: When the virtual keyboard is displayed, the physical keyboard is still active. Therefore it is possible to input data from both keyboards.

Enabling the Input Panel

The Input Panel is disabled by default. Please see the "VX3X Reference Guide" for details on enabling the Input Panel

Power Supply

Vehicle power input for the VX3X is 12V to 80V DC and is accepted without the need to perform any manual adjustments within the VX3X. See the section titled “Installation”, sub-section titled “Vehicle 12-80V DC Direct Connection”.

If 12V to 80V DC power is not available – for example, in an office environment – an optional external Input Power Supply can be used to convert AC wall power to an appropriate DC level. See the section titled “Installation”, sub-section titled “External Power Supply”.

Backup Battery

The internal Lithium backup (coin cell) battery provides power to maintain date and time when the VX3X is not powered from an external source.

Caution	Danger of explosion if battery is incorrectly replaced. Replace only with the same type or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer’s instructions.

Getting Help

All LXE manuals are now available on one CD and they can also be viewed / downloaded from the LXE ServicePass website on the ServicePass / Documentation page. Contact your LXE representative to obtain the LXE Manuals CD or logon information for the ServicePass web pages.

You can also get help from LXE by calling the telephone numbers listed on the LXE Manuals CD, in the file titled "Contacting LXE". This information is also available on the LXE website.

Explanations of terms and acronyms used in this guide are located in the file titled "Glossary" on the LXE Manuals CD.

Manuals and Accessories

Manuals

The following manuals are available on the LXE Manuals CD:

- VX3X Reference Guide
- Contacting LXE
- LXE Technical Glossary

Accessories

The table below lists the available VX3X accessories.

- Where two parts numbers are listed for a given part, the part number ending in "-R" is the RoHS compliant version.
- When only one part number is listed, the part is RoHS compliant unless otherwise noted.

VX3X Brackets	
Bracket, RAM Squeeze Mount, VX3X	VX3001BRACKET
Data Cables	
Cable, Null Modem, Printer/PC D9 to D25	9000053CABLE (part is ***not*** RoHS compliant)
Cable, PC, D9 to D9 (For endcaps with an RS-232 port only)	9000A054CBL6D9D9
Cable, D9 to USB Type A Host (for endcaps with a USB-H port only)	MX3068CABLE
Cable, D9F to USB Client Type A (for endcaps with a USB-C port only)	MX3069CABLE
Cable, D9 to USB Type B Host (for endcaps with a USB-H port only)	MX3071CABLE MX3072CABLE
Replacement Power Cables	
Cable, Input Power, 12 FT, VX3X	VX3051CABLE

Power Supplies	
Power Supply, External, AC, W/US Power Cord VX3X	1300A304PSACUS
Power Supply, External, AC, No Power Cord VX3X	1300A303PSACWW
Adapter Cable for AC Power Supply to VX3X	VX3081CABLE
Antenna Mount Kits	
Remote Mount Antenna Kit, 8 Ft Cable, a/b/g	9000283ANTENNA
Remote Mount Antenna Kit, 6 Ft Cable, a/b/g	9000282ANTENNA
Right Angle Remote Mount Antenna Kit, 6 Ft Cable, a/b/g	9000284ANTENNA
Right Angle Remote Mount Antenna Kit, 15 Ft Cable, a/b/g	9000285ANTENNA
Miscellaneous	
Stylus, with Tethers and Sleeves, 5 Pack	9000A507STYLUS
Protective Film, Touchscreen, 10 Pack, VX3X	MX3503LCDFILM
Cover Plate, RS-232 Port	MX3RA351RS232CVR
Voice Recognition Accessories	
VX3X to Headset adapter cable, 2.5mm	9000076CABLE
Single ear, single headband headset with noise cancelling microphone	9000601HEADSET
Tethered Scanners	
Scanner, LS3408 Fuzzy Logic SR, D9 Interface Cable, 8ft	8510326SCANNER
Scanner, LS3408 Extended Range, D9 Interface Cable, 8ft	8520326SCANNER
Imager, DS3408 Standard Focus, D9 Interface Cable, 9ft	8550326SCANNER
Imager, DS3408 Direct Park Marking, D9 Interface Cable, 9ft	8570326SCANNER
Bluetooth Scanner and Accessories	
LXE Bluetooth module with laser ring scanner, battery, two hand/wrist straps (large and small)	8651100RINGSCR
LXE Bluetooth module with 1D/2D imager ring scanner, battery, two hand/wrist straps (large and small)	8652100RINGSCR
Li-Ion Spare Battery for LXE Bluetooth Ring Scanner Module	8650376BATTERY
LXE 8-bay battery charger with US power cord	8650A377BTBOHCHGRUS
LXE 8-bay battery charger WW	8650378CHARGER
LXE single-bay charger with US wall plug	8650379CHARGER
LXE single-bay charger WW	8650380CHARGER
PowerScan 7000BT Scanner RS-232 with pointer	8700A301SCNRBTSRI
PowerScan 7000BT Base Station, RS232, without universal power supply.	8700A501BASERS232
PowerScan 7000BT Base Station Power Supply, Std US, 120V	8700A502PSACUS
PowerScan 7000BT, RS232 Cable for Base Station, DB9S, Coil, 8’	8700A001CBL8DA9F
PowerScan 7000BT Battery Charger with Power Supply, Four Station, US Std	8700A503CHGR4US
PowerScan 7000BT Battery Pack	8700A504BATT

Bluetooth Standard Range Fuzzy Logic laser scanner	8810A326SCNRBTFZ
Bluetooth Auto range “LORAX” scanner	8820A327SCNRBTER
Desk Cradle, Radio/Charging, Multi-Interface	8800001CRADLE
Desk Cradle, Charge Only, Mulit-Interface	8800002CRADLE
Forklift Cradle, Radio/Charging, Multi-Interface	8800003CRADLE
Forklift Cradle, Charge Only, Multi-Interface	8800004CHARGER
US AC Power Cord	8800051CABLE
Universal Desktop Power Supply 90-264VAC	8800A301ACPS
9-60VDC Forklift Power Supply	8800A302DCPS
Power Cable (connects Power Supply to Forklift)	8800052CABLE
Cable Assembly, DA9F, 9 ft, Cradle to Terminal	8500A051CBL9DA9F
Forklift Rugged Scanner Holder with RAM mount	8800A005STAND
8800 Spare Battery	8800A376BATTERY
Single slot Universal Battery Charger Adapter Cup	8800377CHARGER
Single Slot Battery Charger w/International Power	8800378CHARGER
Universal Battery Charger, 4 slot. Requires 4 adapter cups	8800A379CHGRBASE
Scanner Holster for Belt	8200A501HOLSRBELT
Mounted take up Reel	8000A501INDREEL
Auto Sense Intellistand, Hands Free Scanning	8500A505STANDSMT
Strap with Scanner Clip	9000A411SCNRSTRAP

Installation

Install Mounting Brackets

> ***Caution:*** *This device is intended to transmit RF energy. For protection against RF exposure to humans and in accordance with FCC rules and Industry Canada rules, this transmitter should be installed such that a minimum separation distance of at least 20 cm (7.8 in.) is maintained between the antenna and the general population. This device is not to be co-located with other transmitters.*

Equipment Needed: Phillips No. 1 screwdriver and a Torque wrench capable of measuring to 50 inch pounds (5.64±.56 N/m).

Note: Torquing tool is not supplied by LXE. Tools needed to attach the RAM Clamp Mount to the vehicle are not supplied by LXE.

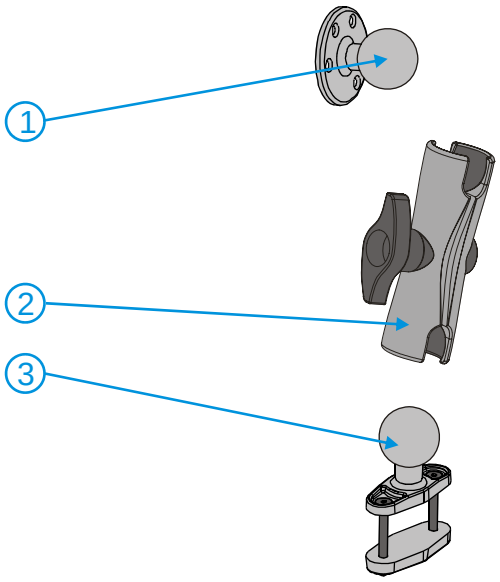
The VX3X is designed to use a RAM mount system.

Before installation begins, verify you have the applicable vehicle mounting bracket assembly components necessary, as shown in the following figures.

RAM Mount System

Components

RAM Mounting Assembly



The RAM mounting assembly consists of the following parts:

1. VX3X RAM ball (included with VX3X)
2. RAM arm, size C
3. RAM clamp mount

   RAM Clamp Mount includes:
   Upper Clamp Piece with Ball
   Lower Clamp Piece
   Bolts (2 each)
   Nylon locking nuts (2 each)
4. Hardware (not shown):

   Lock Nuts, 10-32 (3 each)
   RAM wrench

Torque Measurements

You will need a torquing tool capable of torquing to 20 inch pounds (1.10 N/m).

Torque all screws and bolts according to the following table:

For these nuts…	Torque to
10-32 lock nuts	17 - 20 in/lb (0-95 - 1.10 N/m)

Procedure

Step 1 – Mount Vehicle RAM Clamp Mount

1. Determine the position for mounting the RAM clamp mount. The clamp mount can be used on a beam (such as on a fork lift truck) up to 2.5” (63.5 mm) wide and approximately 2” (50.8 mm) thick. The clamp may be attached to a thicker beam by substituting longer bolts (not included). Be sure to position the RAM clamp mount to allow access to the switches and ports on the VX3X.

2. Position the upper clamp piece with ball (A) on the beam. Place the bolts (B) through the holes in the upper clamp piece.

3. Position the lower clamp piece (C) below the beam. Align the bolts with the holes in the lower clamp piece.

4. Place the nylon locking nuts (D) on the bolts and tighten the bolts.

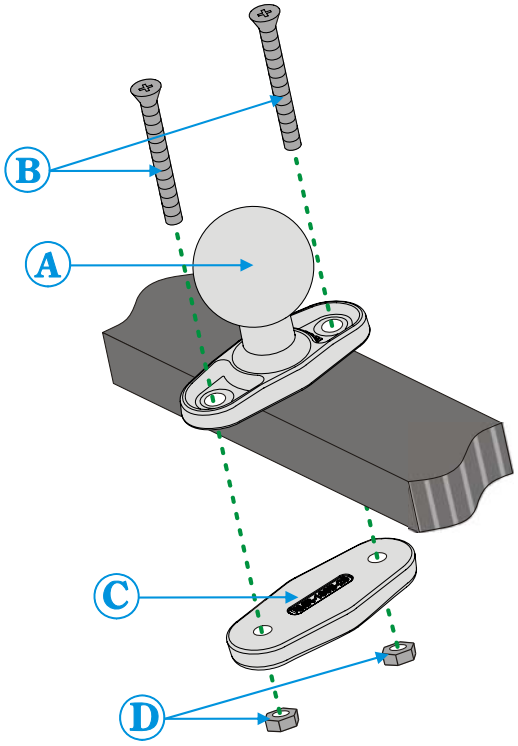


Figure 10 RAM Clamp Mount Components

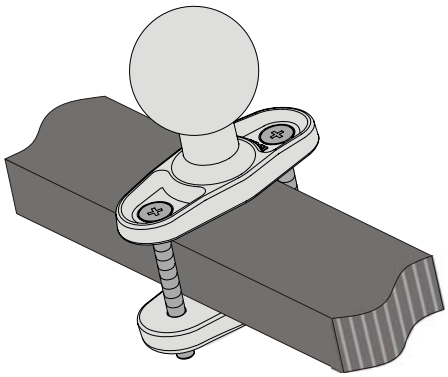
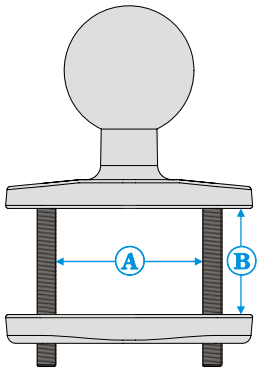


Figure 11 Assembled RAM Clamp Mount

Mounting Dimensions



A 2.56” (65.02 mm)

B 1.84” (46.74 mm)
Varies depending on bolt length

Figure 12 RAM Clamp Mount - Mounting Dimensions (Not To Scale)

Step 2 – Attach RAM Mount Ball to the VX3X

1. Turn the VX3X off before attaching the RAM mount ball.

2. Place the VX3X face down on a stable surface.

3. Position the RAM ball bracket on the rear of the VX3X, aligning the studs on the back of the VX3X with the holes on the RAM ball mount bracket. Attach with three 10-32 lock nuts.

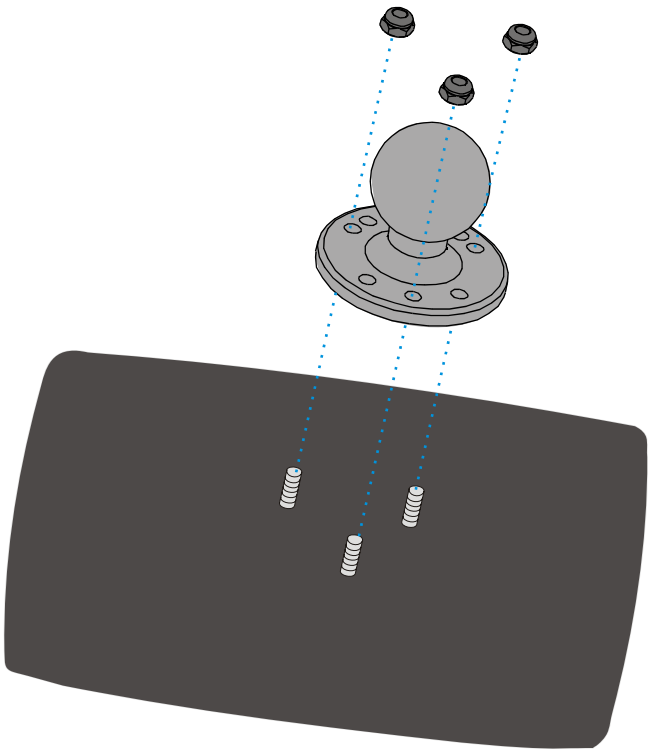


Figure 13 Attach RAM Mount to VX3X

Step 3 – Attach VX3X Assembly to RAM Mount

1. Slip the RAM arm over the ball on the vehicle RAM clamp mount. Insert the ball of the RAM mount bracket into the RAM arm. Adjust the VX3X to the desired position and tighten the knob on the RAM arm using the supplied RAM wrench.

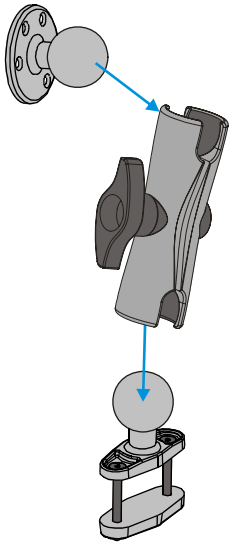


Figure 14 RAM Assembly

Completed Assembly

Figure 15 Completed RAM Mount Assembly

Strain Relief Cable Clamps

Equipment Required: Phillips screwdriver (not supplied by LXE)

There are two strain relief cable clamps secured to the VX3X endcap. Use the strain relief clamps to secure audio, power, and I/O cables attached to the VX3X.

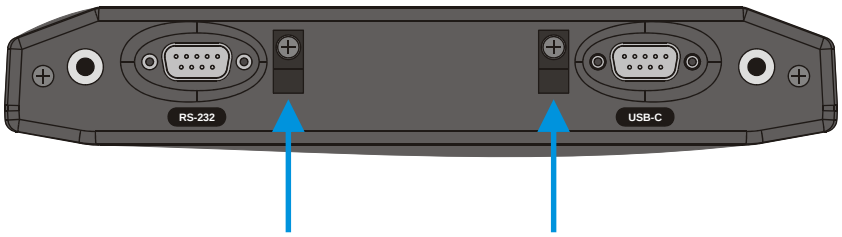


Figure 16 Strain Relief Cable Clamps

1. Remove the strain relief clamp from the endcap by turning the screw counterclockwise. Put the screw aside in a safe location.
2. Slide the strain relief clamp over the cable.

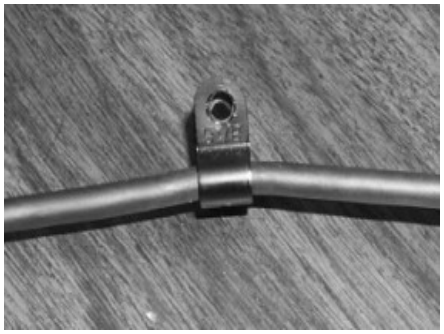


Figure 17 Slide Clamp Over Cable

3. Using a Phillips screwdriver and the screw that was removed, refasten the clamp holding the cable to the endcap. Do not stretch the cable. Leave enough slack in the cable to allow it to be connected and disconnected easily when needed.
4. Continue in this manner until all cables are secured to the endcap.

Install Stylus Tether and Sleeve (Optional)

Carefully remove the paper backing from the Stylus Clip sticky. Firmly press the sticky side of the clip onto the mobile device and hold in place for 15 seconds. Thread the tether through the end of the stylus and tie the ends firmly to the Stylus Clip so that the ends don't interfere with placing the stylus in the Stylus Clip. Place the stylus in the Stylus Clip when not in use.

An extra or replacement stylus can be ordered from LXE. See the section titled "Accessories" for the stylus part number.

Install/Remove Touchscreen Protective Film Optional)

First, clean the display of fingerprints, lint particles, dust and smudges.

Remove the protective film from its container. Remove any protective backing from the film sheet by lifting the backing from a corner of the film. Discard the backing.

Apply the film to the screen starting at one side and smoothing it across the display. If air bubbles appear, raise the film slightly and continue smoothing the film across the display until it covers the glass surface of the display.

If dust, lint or smudges are trapped between the protective film and the glass display, remove the protective film, clean the display and apply the protective film again.

Connect Serial Barcode Scanner

Some endcap configurations contain a single serial port or dual serial ports. These ports are labeled RS-232 and are configured either as COM1 or COM3. Please refer to "Components" earlier in this manual for port identification.

Refer to the documentation received with the barcode scanner for complete instructions. Read all warnings and caution labels.

Before using the scanner, read section titled "Operation", sub- section titled "Laser Barcode Scanner Warnings".

Pin 9 of COM1 or COM3 (when present) may be configured to provide +5V or RI. To change Pin 9 of the port, please refer to the "VX3X Reference Guide".

Caution – Do Not Use the USB-C or USB-H Labeled Port for Tethered Scanners.

The scanner cable is attached to the connector labeled "RS-232". The scanner receives power from the VX3X.

The cable requires a nine-pin D-shell female connector for the VX3X.

Note: Use of a shielded cable is required to maintain FCC and CISPR22 emissions compliance.

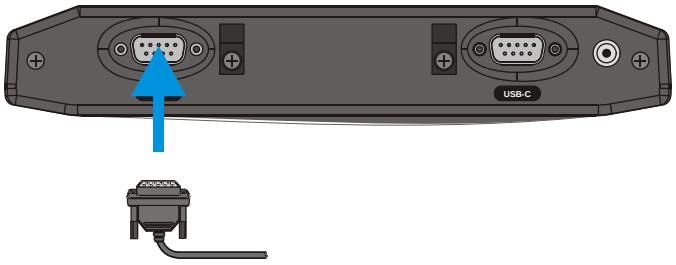


Figure 18 Connect Serial Scanner Cable

1. Power off the VX3X before connecting the scanner cable to the VX3X.
2. Seat the connector firmly over the pins and turn the thumbscrews in a clockwise direction. Do not overtighten.
3. Use a strain relief clamp to secure the cable.
4. Press the power button to power up the VX3X.

When you have finished using the scanner, remove it from the VX3X and store the scanner in a closed container or bag.

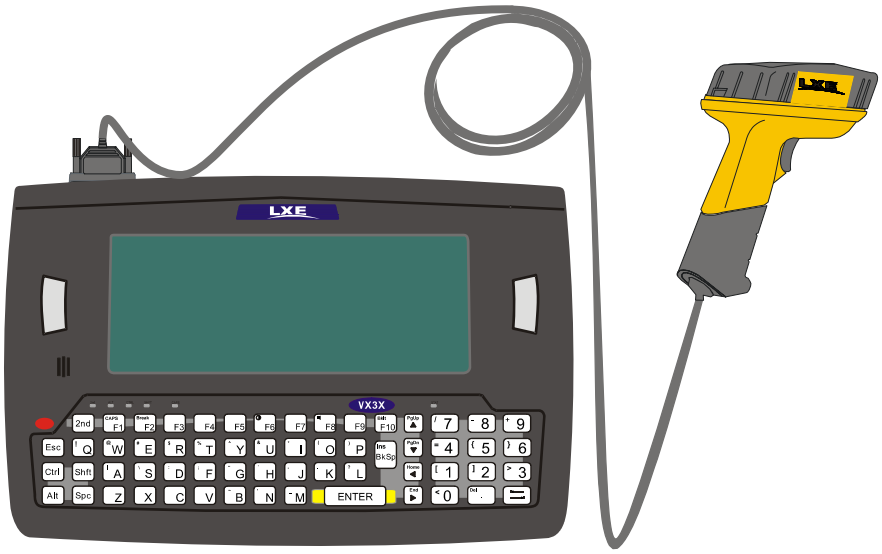
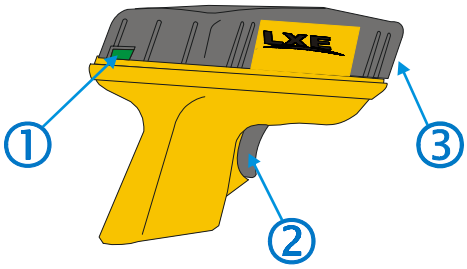


Figure 19 VX3X with Generic Barcode Scanner Attached



1. Good Scan LED (or equivalent)
2. Trigger
3. Laser Aperture at Front

Figure 20 Generic Barcode Scanner

Refer to the documentation received with the barcode scanner for complete instructions.

Connect Serial Printer or PC

Some endcap configurations contain a single serial port or dual serial ports. These ports are labeled RS-232 and are configured either as COM1 or COM3. Please refer to "Components" earlier in this manual for port identification.

Refer to the documentation received with the printer or PC for complete instructions.

Pin 9 of COM1 or COM3 (when present) may be configured to provide +5V or RI. To change Pin 9 of the port, please refer to the "VX3X Reference Guide".

Caution – Do Not Use the USB-C or USB-H Labeled Port for PC serial cables or printers.

The printer or PC cable requires a nine-pin D-shell female connector for the VX3X.

The printer or PC cable is attached to the connector labeled "RS-232".

Note: Use of a shielded cable is required to maintain FCC and CISPR22 emissions compliance.

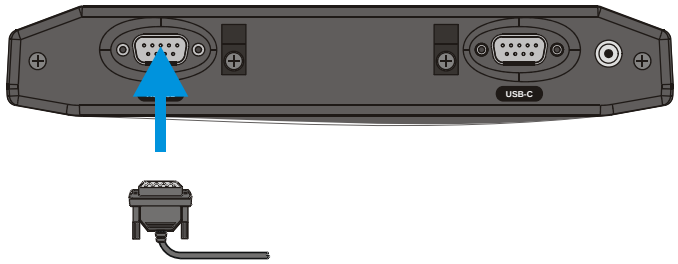


Figure 21 Connect Serial Cable to COM3

1. Power off the VX3X before connecting the cable to the VX3X.
2. Seat the connector firmly over the pins and turn the thumbscrews in a clockwise direction. Do not overtighten.
3. Use a strain relief clamp to secure the cable.
4. Press the power button to power up the VX3X.

USB-C Port

Some endcap configurations contain a USB client port. This port is labeled USB-C. Please refer to “Components” earlier in this manual for port identification.

Caution – Do Not Use the USB-C Labeled Port for scanners, PC serial cables or printers.

The USB-C connector accepts an adapter cable which provides a USB client port. Cable requires a nine-pin D-shell female connector for the VX3X.

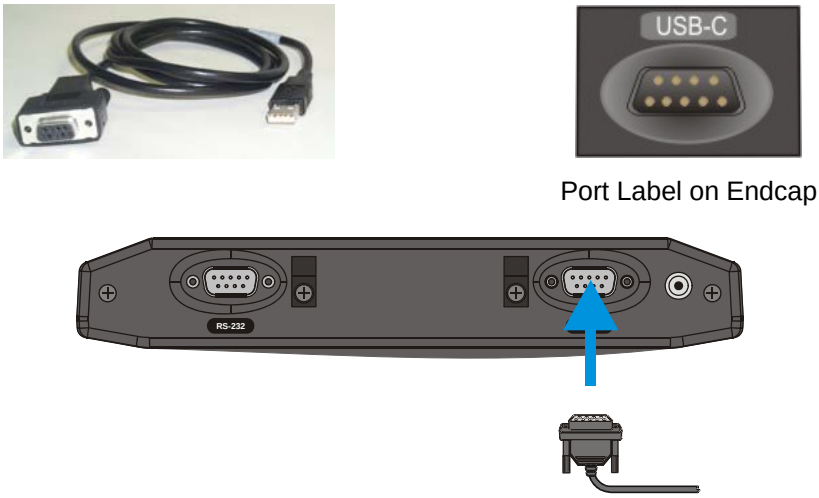


Figure 22 Connect USB-C Cable

1. Power off the VX3X before connecting the cable to the VX3X.
2. Seat the connector firmly over the pins and turn the thumbscrews in a clockwise direction. Do not overtighten.
3. Use a strain relief clamp to secure the cable.
4. Press the power button to power up the VX3X.
5. Attach the USB end of the cable to the PC.

USB-H Port

Some endcap configurations contain a USB host port. This port is labeled USB-H. Please refer to "Components" earlier in this manual for port identification.

Caution – Do Not Use the USB-H Labeled Port for scanners, PC serial cables or printers.

The USB-C connector accepts an adapter cable which provides a USB host port. Cable requires a nine-pin D-shell female connector for the VX3X.

UBS Host Type A

Port Label on Endcap

USB Host Type B

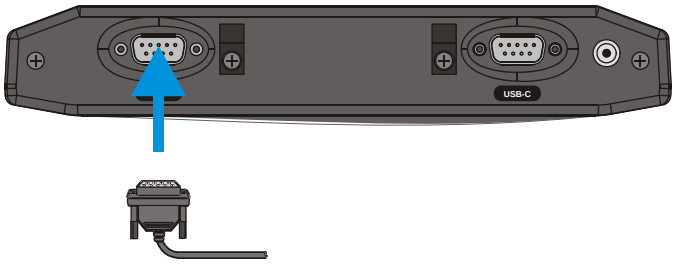


Figure 23 Connect USB-H Cable

1. Power off the VX3X before connecting the cable to the VX3X.
2. Seat the connector firmly over the pins and turn the thumbscrews in a clockwise direction. Do not overtighten.
3. Use a strain relief clamp to secure the cable.
4. Press the power button to power up the VX3X.

Connect External Headset

Note: When the remote antenna mount is ordered, the VX3X does not have an audio connector.

The VX3X provides an external headset connection via an audio jack connector labeled “Audio”. The audio jack accepts a headset with a 2.5mm plug, such as a mono headset with microphone or a stereo headset. Please refer to the VX3X Reference Guide for information on configuring the audio port for a mono headset with microphone or a stereo headset.

An adapter cable (LXE Part No. 9000A076CBLHEADSET1) can be attached to the audio port. The adapter cable has a 2.5mm plug on one end to attach to the VX3X and a quick disconnect connector on the other end to connect to a variety of LXE voice recognition headsets.

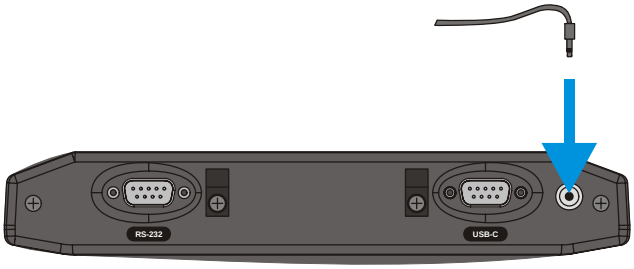
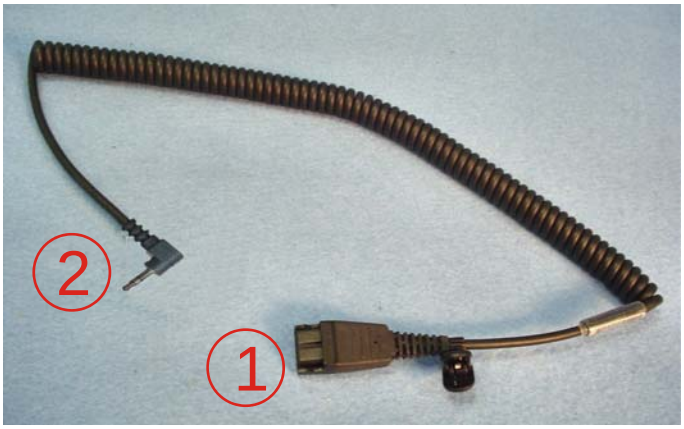


Figure 24 Connect External Headset

LXE Headsets

A coiled headset adapter cable is used to connect the VX3X to an LXE headset.

1. Insert the 2.5mm end of the adapter cable into the audio jack.



1 Quick Disconnect Connector

2 2.5mm Connector

Figure 25 Headset Adapter Cable Components

2. Use a strain relief clamp to secure the cable.

3. Connect the quick connect end of the adapter cable to the LXE headset. Align the pins and push the connectors together until they click and are locked in place.

Figure 26 Headset Quick Disconnect Connector

4. If the adapter cable is removed from the VX3X, replace the plug to ensure the VX3X is environmentally sealed.

Other Headsets

The audio jack accepts a headset with a 2.5mm plug, such as a mono headset with microphone or a stereo headset.

1. Insert the speaker or headphone plug into the audio connector; making sure the plug is firmly seated in the audio jack.

2. Replace the plug when the speaker or headset is removed from the audio jack.

3. Use a strain relief clamp to secure the cable.

Connect Antenna

If the VX3X has the optional remote mount external antenna, please refer to the "Vehicle Remote Mount Antenna Installation Sheet", available on the LXE Manuals CD or ServicePass website, for details.

If the VX3X has an internal antenna (no antenna connector on the endcap), the antenna was connected when the VX3X was manufactured.

Connect Power Cable

1. Connect the power cable to vehicle power (See the following section titled "Vehicle 12-80VDC Direct Connection".)

   - or -

   to an AC adapter. (See the following section titled "External Power Supply".).

2. The plug and receptacle are keyed and care must be used when connecting the cables. Tighten the nut of the plug clockwise until tight.

   Secure the cable with the strain relief cable clamps.

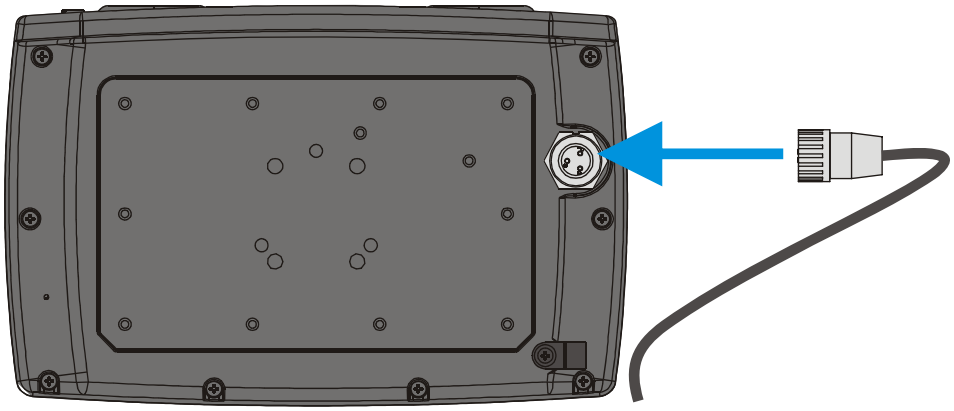


Figure 27 Connect Power Cable to VX3X

3. Turn the VX3X on.

External Power Supply, Optional

The LXE-approved AC Power Supply and Adapter Cable are only intended for use in a 25ºC (77ºF) maximum ambient temperature environment.

1. AC Input Cable (US only)
2. DC Output Cable

AC Power Supply

3. To DC Output Cable (see above)
4. To VX3X

Adapter Cable, AC Power Supply to VX3X

Figure 28 Optional Power Configuration

In North America, this unit is intended for use with a UL Listed ITE power supply with output rated 12 – 80 VDC, minimum 15W. Outside North America, this unit is intended for use with an IEC certified ITE power supply with output rated 12 – 80 VDC, minimum 15W.

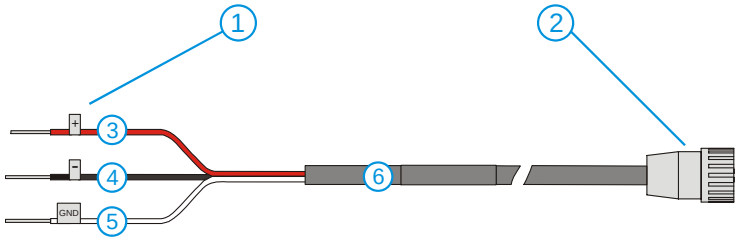
The external power supply may be connected to either a 120V, 60Hz supply or, outside North America, to a 230V, 50Hz supply, using the appropriate detachable cordset. In all cases, connect to a properly grounded source of supply provided with maximum 15 Amp overcurrent protection (10 Amp for 230V circuits).

How To: Connect External Power Supply

1. Connect the detachable cordset provided by LXE (US only, all others must provide their own cable) to the external power supply (IEC 320 connector).
2. Plug cordset into appropriate, grounded, electrical supply receptacle (AC mains).
3. Connect the DC Output Cable end to the corresponding connector on the Adapter Cable.
3. Connect the watertight connector end of the Adapter Cable to the VX3X's Power Connector by aligning the connector pins to the power connector; push down on the watertight connector and twist it to fasten securely.
4. Turn the VX3X on.

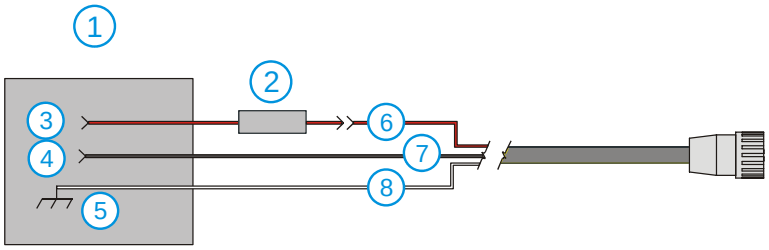
Vehicle 12-80VDC Power Connection

Caution:	*For proper and safe installation, the input power cable must be connected to a fused circuit on the vehicle. This fused circuit requires a 2 Amp maximum time delay (slow blow) high interrupting rating fuse. If the supply connection is made directly to the battery, the fuse should be installed in the positive lead within 5 inches of the battery positive (+) terminal.*
Caution:	*For installation by trained service personnel only.*
Warning:	*Risk of ignition or explosion. Explosive gas mixture may be vented from battery. Work only in well ventilated area. Avoid creating arcs and sparks at battery terminals.*



1. To Vehicle Battery
2. To VX3X
3. Red (DC+)
4. Black (DC-)
5. White (GND)
6. 12 – 80 VDC

Figure 29 Vehicle Power Connection Cable (Fuse Not Shown)



1. Vehicle Electrical System
2. 2 Amp Slow Blow Fuse
3. DC +
4. DC -
5. Vehicle Chassis
6. Red
7. Black
8. White

Figure 30 Connecting the Power Cable to the Vehicle

Note: Correct electrical polarity is required for safe and proper installation. See the following figure titled "Vehicle Connection Wiring Color Codes" for additional wire color-coding specifics.

How To: Connect Vehicle 12-80VDC Connection

1. The VX3X must be turned off and the power cable must be UNPLUGGED from the VX3X.

2. While observing the fuse requirements specified above, connect the power cable as close as possible to the actual battery terminals of the vehicle. When available, always connect to unswitched terminals in vehicle fuse panel, after providing proper fusing.

   ATTENTION: ***For uninterrupted power, electrical supply connections should not be made at any point after the ignition switch of the vehicle.***

3. Route the power cable the shortest way possible. The cable is rated for a maximum temperature of 75°C (167°F). When routing this cable it should be protected from physical damage and from surfaces that might exceed this temperature.

   Do not expose the cable to chemicals or oil that may cause the wiring insulation to deteriorate.

   Note: If the vehicle is equipped with a panel containing Silicon Controller Rectifiers (SCR's), avoid routing the power cable in close proximity to these devices.

   Always route the cable so that it does not interfere with safe operation and maintenance of the vehicle.

   Use proper electrical and mechanical fastening means for terminating the cable. Properly sized "crimp" type electrical terminals are an accepted method of termination. Please select electrical connectors sized for use with 22AWG (1mm^2) conductors.

   Wiring color codes for LXE supplied DC input power cabling:

Vehicle Supply		Wire Color
+12 - 80VDC	(DC +)	Red
Return	(DC -)	Black
Vehicle Chassis	GND	White

Figure 31 Vehicle Connection Wiring Color Codes

4. Provide mechanical support for the cable by securing it to the vehicle structure at approximately one foot intervals, taking care not to over tighten and pinch conductors or penetrate outer cable jacket.

5. Connect the power cable to the VX3X.

Operation

Power Button

The power button is located above the ESC key on the keypad. After power is connected, the Power button must be pressed to turn the device on.

Figure 32 Location of the Power (PWR) Button

Quickly tapping the Power button places the device immediately in Suspend mode. Quickly tapping the Power button again, or touching the screen, immediately returns the device from Suspend.

Power Management

Because the VX3X is powered by the vehicle battery, power management options are limited.

The display backlight can be configured to turn off after a specified period of inactivity. Please see the "VX3X Reference Guide" for configuration details.

The VX3X can be placed in Suspend Mode. To enter suspend mode, tap the power button and release or select **Start** | **Suspend**. To exit suspend tap the screen, press any key or tap the power button.

Restart Sequence

Tap **Start | Run,** then type **warmboot** in the textbox and press **Enter.** If the touchscreen is not accepting taps or needs recalibration, press <Ctrl>+<Esc> to force the Start Menu to appear.

When the Windows desktop is displayed or an application begins, the power on (or reboot) sequence is complete. If any changes to the settings had been saved previously, they are restored on reboot. There may be slight delays while the wireless client connects to the network, re-authorization for voice-enabled applications completes, Wavelink Avalanche management of the VX3X startup completes, or Bluetooth relationships establish or re-establish.

Display and Touchscreen

The VX3X Display is a transmissive LCD display capable of supporting Half VGA graphics modes. Display size is half screen, 640 x 240 pixels. The display covering is designed to resist stains. The touch screen allows signature capture and touch input.

The touch screen is a Resistive Panel with a scratch resistant finish that can detect touches by a stylus, and translate them into computer commands. In effect, it simulates a computer mouse. Only Delrin or plastic styluses should be used.

Note: Always use the point of the stylus for tapping or making strokes on the display. Never use an actual pen, pencil or sharp object to write on the touch screen.

An extra or replacement stylus may be ordered from LXE. See the "Accessories" section for the stylus part number.

Set the Display Contrast

Adjusting screen contrast lightens or darkens the characters to make them visible at a comfortable level. The contrast is incremented or decremented one step each time the contrast key is pressed.

◐ To adjust screen contrast, locate the <F6> key at the top of the keypad. Adjust the display contrast by pressing the:

- 2nd key then the <F6> key
- Use the Up Arrow and Down Arrow keys to adjust contrast until the display lightens or darkens to your satisfaction.
- Press the Enter key to exit this mode.

The LED for the 2nd key blinks until the special editing mode (set contrast) is complete.

Set the Display Backlight Timer

The Display Backlight Timer can be configured, if desired. For more information, please refer to "Set the Display Backlight Timer" in the "VX3X Reference Guide".

Set the Display Brightness

The brightness on the color display is incremented or decremented one step each time the arrow key is pressed until either the maximum or minimum brightness is achieved (8 steps). The brightness setting is recalled at power up.

- 2nd key then the <F10> key
- Use the Up Arrow and Down Arrow keys to adjust brightness until the display lightens or darkens to your satisfaction.
- Press the Enter key to exit this mode.

The LED for the 2nd key blinks until the special editing mode (set display brightness) is complete.

Cleaning the Display

Keep fingers and rough or sharp objects away from the display. If the glass becomes soiled or smudged, clean only with a standard household cleaner such as Windex® without vinegar or use Isopropyl Alcohol. Do not use paper towels or harsh-chemical-based cleaning fluids since they may result in damage to the glass surface. Use a clean, damp, lint-free cloth. Do not scrub optical surfaces. If possible, clean only those areas which are soiled. Lint/particulates can be removed with clean, filtered canned air.

Disabling the Touchscreen

The touchscreen can be disabled, if desired. For more information, please refer to "Disabling the Touchscreen" in the "VX3X Reference Guide".

Calibrating the Touchscreen

Although the touch screen is installed and calibrated at the factory, users may make adjustments to it. To calibrate the touchscreen, select **Start | Settings** and double tap the Stylus icon.

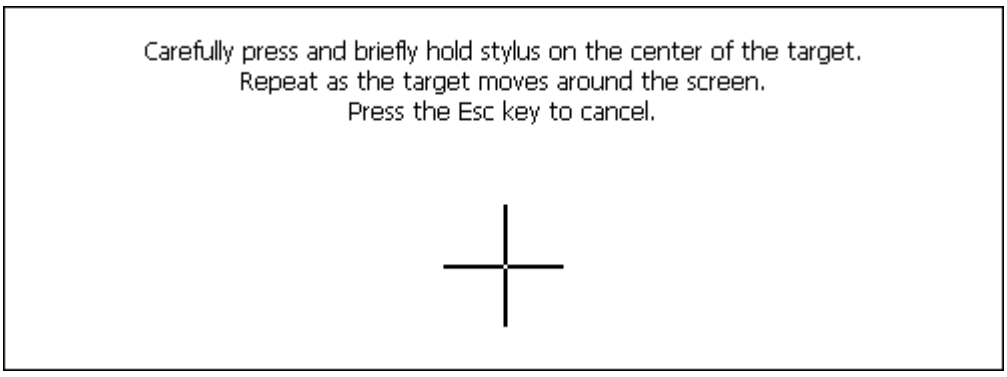

Carefully press and briefly hold stylus on the center of the target.
Repeat as the target moves around the screen.
Press the Esc key to cancel.

Figure 33 Touchscreen Calibration, Calibration Targets

The calibration utility displays a cross on the screen. Touch the center of the cross with the stylus and hold for a few seconds. Release and repeat with the next cross. After all locations have been touched, either press <Enter> or click the Calibration button.

Touchscreen Protective Film

LXE offers a replaceable touchscreen protective film to protect the touchscreen when the VX3X is used in an abrasive environment. Installation and removal instructions can be found earlier in this guide.

Adjust Speaker Volume

The speaker is located on the front of the device above the Power button. The audio volume can be adjusted to a comfortable level for the user. The volume is increased or decreased one step each time the volume key is pressed. The device has an internal speaker and a jack for an external headset. Operational "beeps" are emitted from the speaker.

Using the Keypad

Note: Volume & Sounds (in Control Panel) must be enabled before the following key sequences will adjust the volume.

◄ To adjust speaker volume, locate the <F8> key at the top of the keypad. Adjust the speaker volume by pressing the:

2nd key then the <F8> key to enter Volume change mode.

Use the Up Arrow and Down Arrow keys to adjust volume until the speaker volume is satisfactory.

Press the Enter key to exit this mode.

The LED for the 2nd key blinks until the special editing mode (set audio speaker volume) is complete.

Using the Touchscreen

Select **Start | Settings | Control Panel | Volume & Sounds | Volume** tab. Change the volume setting and tap OK to save the change. You can also select / deselect sounds for key clicks and screen taps and whether each is loud or soft.

As the volume scrollbar is moved between Loud and Soft, the computer will emit a tone each time the volume increases or decreases in decibel range.

Microsoft Windows CE Event Sounds

The VX3X includes a customized sound scheme. The customized WAV files are preferable to the standard Microsoft Windows CE sounds when using the internal speaker.

Laser Barcode Scanner Warnings

- Do not look into the laser's lens.
- Do not stare directly into the laser beam.
- Do not remove the laser caution labels from the scanner.
- Do not connect the laser barcode module to any other device.

Caution:	*Please read the caution labels.* *Avoid exposure. Laser light is emitted from the scanner's aperture.* *Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.* *The scanner uses laser light. The following labels are* ***representations*** *of caution and warning labels placed on laser scanners.*

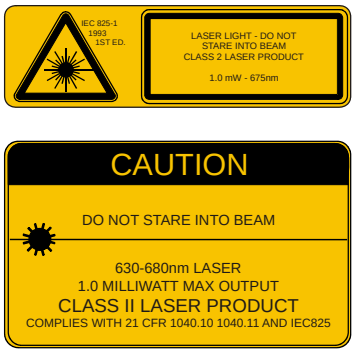


Figure 34 Caution Labels Class II Scanner

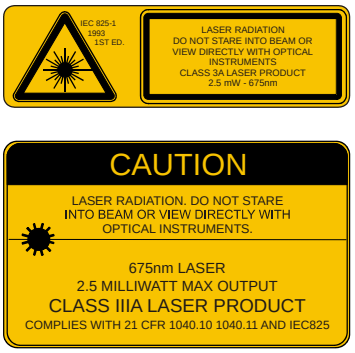


Figure 35 Caution Labels Class IIIA Scanner

Do not pour, spray, or spill any liquid on the scanner. The Barcode Scanner contains the circuitry, scanning motor and laser. Handle with appropriate care.

Enter Data

You can enter data into the VX3X through several different methods:

- The tethered scanner connected to the COM1 serial port provides barcode data entry
- The serial port and SUB port are used to input/output data
- The keyboard provides manual entry
- The touchscreen also provides manual entry

Keyboard Entry

Refer to Appendix A "Key Maps" for specific keypresses.

The keyboard is used to manually input data that is not collected otherwise. Almost any function that a full sized computer keyboard can provide is duplicated on the VX3X keyboard but it may take a few more keystrokes to accomplish a keyed task.

Almost every key has two or three different functions. The primary alpha or numeric character is printed on the key.

For example, when the <2nd> key is selected pressing the desired second-function key produces the <2nd> character i.e. <2nd> + F1 toggles the CAPS Lock function. The specific <2nd> character is printed above the corresponding key.

Please refer to Appendix A "Key Maps" for instruction on the specific keypresses to access all PC-compatible keyboard functions.

Touchscreen Entry

Note: This section is directed to the VX3X user. The assumption is that the unit has been configured and the touch panel calibrated by the System Administrator prior to releasing the VX3X for use.

Note: Always use the point of the stylus for tapping or making strokes on the display. Never use an actual pen, pencil or sharp object to write on the touch screen.

The touchscreen input performs the same function as the mouse that is used to point to and click elements on a desk top computer. The stylus is used in the same manner as a mouse – single tap or double tap to select menu options, drag the stylus across text to select, hold the stylus down to activate slider bars, etcetera. Holding the stylus down for ½ second performs the right mouse click function.

When using a stylus, hold the stylus as if it were a pen or pencil. Touch an element on the screen with the tip of the stylus then remove the stylus from the screen. The touch screen responds to an actuation force (touch) of up to 4 oz. of pressure.

The touch screen can be used in conjunction with the keyboard and an input/output device connected to one of the VX3X's serial ports.

- Touch the stylus to the field of the data entry form to receive the next data feed.
- The cursor begins to flash in the field.
- The unit is ready to accept data from either the keyboard or a device connected to a serial port.

Right Click

A right click can be simulated on the touch screen. To perform a right click, touch the touch screen with the stylus and hold it in the same location for a short time.

Tethered Scanner Entry

The following section is directed toward a generic tethered scanner connected to the COM1 serial port on the VX3X.

Aiming the Barcode Scanner

Aim the scanner ***away*** from you, direct it at the barcode and press the trigger to scan.

The Scan On LED (or equivalent) turns red to indicate the scanner is on.

Adjust the aim so that the thin, red laser beam covers the entire length of the barcode.

Some scanners use a laser aiming beam which then spreads into a wide beam when the scanner's Aiming Beam Timer expires. Place the aiming beam in the center of the barcode and hold the scanner steady until the beam spreads and the barcode is decoded. Beeps may be heard as the barcode is decoded. Refer to the barcode scanner user's guide for information on the Aiming Beam Timer and beep sequences, and the TE reference guide for host generated beep sequences.

The scan beam must cross every bar and space on the barcode.

Figure 36 Scan Beam

Distance from Label

Large barcodes can be scanned at the maximum distance. Hold the scanner closer to small barcodes (or with bars that are very close together).

Note: Do not position the scanner exactly perpendicular to the barcode being scanned. In this position, light can bounce back into the scanner's exit window, and possibly prevent a successful decode.

Successful Scan

When the scan is successful, the scanner's good scan indicator illuminates, the scan on indicator is off, and the currently running application may produce a distinctive audible tone.

Unsuccessful Scan

When the scan is unsuccessful, the scan on indicator remains illuminated and the currently running application may produce distinctive audible tones. Check the following:

- Is the scanner programmed for the barcode being read?
- Check the barcode for marks or physical damage e.g. ripped label, missing section, etc.
- Try scanning test symbols of the same code type at different distances and angles.

Bluetooth Scanners

Bluetooth scanners are paired to the VX3X wirelessly using the VX3X Bluetooth wireless client.

See previous sections on Bluetooth for more information.

Only LXE Bluetooth scanners and LXE Bluetooth printers are supported by LXE. See *Accessories*.

Voice Data

Data is entered into the VX3X by speaking into the headset's microphone when prompted. Please contact your System Administrator if assistance is needed with the voice software.

Bluetooth Devices

Assumption: The System Administrator has Discovered and Paired targeted Bluetooth devices for each VX3X. The System Administrator has also enabled / disabled Bluetooth settings and assigned a Computer Friendly Name for each VX3X. See the *VX3X Reference Guide* for information and instruction on the VX3X, Bluetooth control panel applet and supported LXE Bluetooth printers and scanners.

The Bluetooth taskbar Icon state and Bluetooth scanner LED states change as Bluetooth devices are discovered, pair, connect and disconnect. There may be audible or visual signals as paired devices re-connect with the VX3X. Only LXE printers or scanners are recognized and displayed in the Bluetooth panel. All other Bluetooth devices are ignored. (see *VX3X Reference Guide* for details).

Taskbar Icon	Legend
	Bluetooth module is connected to one or more of the targeted Bluetooth device(s).
	VX3X is not connected to any Bluetooth device. VX3X is ready to connect with any Bluetooth device. VX3X is out of range of all paired Bluetooth device(s). Connection is inactive.

Note: When an active paired device, not the VX3X, enters Suspend Mode, is turned Off or leaves the VX3X Bluetooth scan range, the Bluetooth connection between the linked device and the VX3X is lost. There may be audible or visual signals as paired devices disconnect from the VX3X.

Notes

- The VX3X does not have a Bluetooth managed LED.
- The LED on the Bluetooth scanner illuminates during a scanning operation; there is no Scan LED on the VX3X.
- Barcode data captured by the Bluetooth scanner is manipulated by the settings in the VX3X Scanner Properties control panel applet.
- Multiple beeps may be heard during a barcode scan using the Bluetooth scanner; beeps from the Bluetooth scanner as the barcode data is accepted/rejected, and other beeps from the VX3X during final barcode data manipulation.

See *Accessories* for supported Bluetooth printers and scanners.

AppLock, if installed, does not stop the end-user from using Bluetooth, nor does it stop authorized Bluetooth devices from pairing with the VX3X while AppLock is in control.

Appendix A Key Maps

The VX3X Keypad

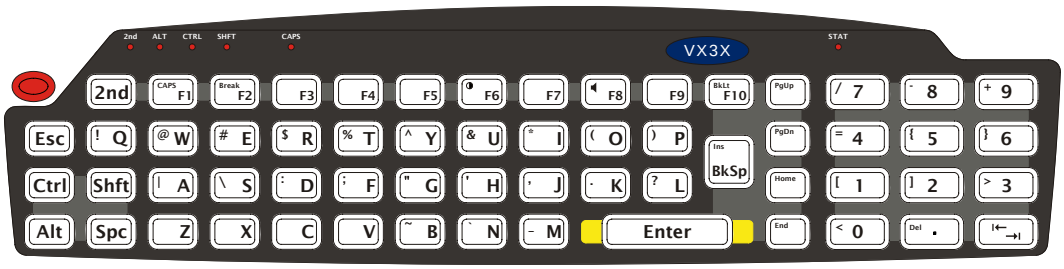


Figure 37 VX3X QWERTY Keyboard

The key map table that follows lists the commands used for the VX3X. Note that since the VX3X uses a Microsoft Windows CE operating system, no DOS Terminal Emulation keypress sequences are provided.

Key Map 101-Key Equivalencies

Note: This key mapping is used on VX3X computers that are NOT running LXE's RFTerm.

When using a sequence of keys that includes the 2nd key, press the 2nd key first then the rest of the key sequence.

Note: When the computer boots, the default condition of Caps (or CapsLock) is Off. The Caps (or CapsLock) condition can be toggled with a 2nd+F1 key sequence. The CAPS LED is illuminated when CapsLock is On.

To get this key	Press These Keys and Then					Press this key
	2nd	Shift	Ctrl	Alt	CapsLock	
Contrast	x					F6
Volume	x					F8
Backlight	x					F10
2nd						2nd
Shift						Shft
Alt						Alt
Ctrl						Ctrl
Esc						Esc
Space						Spc
Enter						Enter

To get this key	Press These Keys and Then					Press this key
	2nd	Shift	Ctrl	Alt	CapsLock	
Scan [1]						Scan
CapsLock (Toggle)	x					F1
Back Space						BkSp
Tab						Tab
BackTab	x					Tab
Break	x					F2
Pause	x	x				F3
Up Arrow						Up Arrow
Down Arrow						Down Arrow
Right Arrow						Right Arrow
Left Arrow						Left Arrow
Insert	x					BkSp
Delete	x					DOT
Home	x					Left Arrow
End	x					Right Arrow
Page Up	x					Up Arrow
Page Down	x					Down Arrow
ScrollLock	x	x				F4
F1						F1
F2						F2
F3						F3
F4						F4
F5						F5
F6						F6
F7						F7
F8						F8
F9						F9
F10						F10
F11	x	x				F1
F12	x	x				F2
a					Off	A
b					Off	B

[1] Left Scan key default value is Scan, however this key has no affect on an external scanner attached to the VX3X. Right Scan key default value is Enter.

To get this key	Press These Keys and Then					Press this key
	2nd	Shift	Ctrl	Alt	CapsLock	
c					Off	C
d					Off	D
e					Off	E
f					Off	F
g					Off	G
h					Off	H
i					Off	I
j					Off	J
k					Off	K
l					Off	L
m					Off	M
n					Off	N
o					Off	O
p					Off	P
q					Off	Q
r					Off	R
s					Off	S
t					Off	T
u					Off	U
v					Off	V
w					Off	W
x					Off	X
y					Off	Y
z					Off	Z
A		x				A
B		x				B
C		x				C
D		x				D
E		x				E
F		x				F
G		x				G
H		x				H
I		x				I
J		x				J
K		x				K

To get this key	Press These Keys and Then					Press this key
	2nd	Shift	Ctrl	Alt	CapsLock	
L		x				L
M		x				M
N		x				N
O		x				O
P		x				P
Q		x				Q
R		x				R
S		x				S
T		x				T
U		x				U
V		x				V
W		x				W
X		x				X
Y		x				Y
Z		x				Z
1						1
2						2
3						3
4						4
5						5
6						6
7						7
8						8
9						9
0						0
DOT						DOT
<	x					0
[	x					1
]	x					2
>	x					3
=	x					4
{	x					5
}	x					6
/	x					7
-	x					8

To get this key	Press These Keys and Then					Press this key
	2nd	Shift	Ctrl	Alt	CapsLock	
+	x					9
*	x					I
: (colon)	x					D
; (semicolon)	x					F
?	x					L
`	x					N
_ (underscore)	x					M
, (comma)	x					J
‘ (apostrophe)	x					H
~ (tilde)	x					B
\	x					S
|	x					A
“	x					G
!	x					Q
@	x					W
#	x					E
$	x					R
%	x					T
^	x					Y
&	x					U
(	x					O
)	x					P

IBM 3270 Keypad Overlay

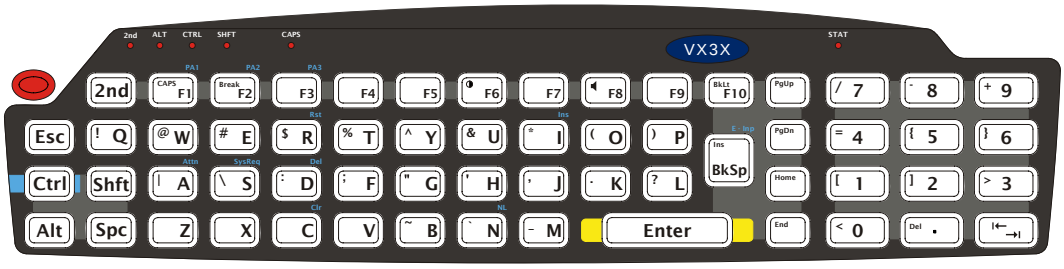


Figure 38 IBM 3270 Specific Keypad

The 60-key keypad is available with an IBM 3270 overlay designed to allow the user to enter terminal emulator commands when running LXE's RFTerm™ program. When running this program please refer to the following reference guide for equivalent keys and keypress sequences:

- RFTerm™ Reference Guide

IBM 5250 Keypad Overlay

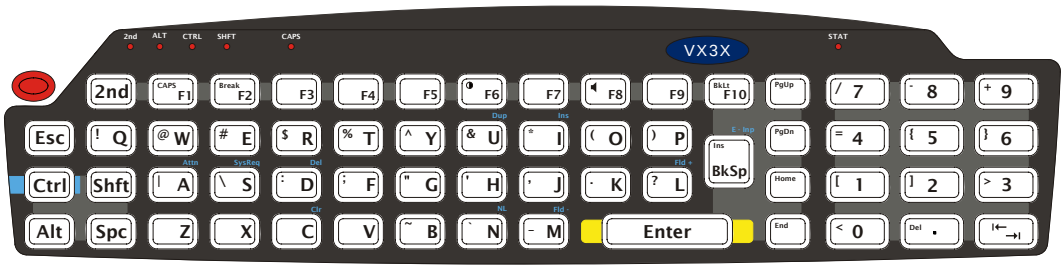


Figure 39 IBM 5250 Specific Keypad

The 60-key keypad is available with an IBM 5250 overlay designed to allow the user to enter terminal emulator commands when running LXE's RFTerm™ program. When running this program please refer to the following reference guide for equivalent keys and keypress sequences:

- RFTerm™ Reference Guide

Appendix B Regulatory Notices and Safety Information

FCC Information:

This device complies with FCC Rules, part 15. Operation is subject to the following conditions:

1. This device may not cause harmful interference
   and
2. This device must accept any interference that may be received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.
Warning: Changes or modifications to this device not expressly approved by LXE, Inc., could void the user's authority to operate this equipment.

EMC Directive Requirements:

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Industry Canada:

This Class A digital apparatus meets all requirements of the Canadian Interference Causing Equipment Regulations. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada. Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de Classe A prescrites dans le Règlement sur le brouillage radioélectrique édits par le ministère des Communications du Canada.

Notice:

The long term characteristics or the possible physiological effects of radio frequency electromagnetic fields have not been investigated by UL.

RF Safety Notice:

Caution:

This device is intended to transmit RF energy. For protection against RF exposure to humans and in accordance with FCC rules and Industry Canada rules, this transmitter should be installed such that a minimum separation distance of at least 20 cm (7.8 in.) is maintained between the antenna and the general population. This device is not to be co-located with other transmitters.

R&TTE Directive Requirements (Applies only to Equipment operated within the EU/EFTA)

Information to User

A label on the exterior of the device should resemble one of the labels shown below (the label contains the LXE part number of the installed radio card). The labels shown below and affixed to the device, identify where the device may be used and where its use is restricted. Use of a device is prohibited in countries not listed below or otherwise identified by the label. (May or may not include the 0560 Notified Body No.)

Approvals

Product	EMI / EMC Standards	Safety Standards
VX3X	FCC Part 15 Subpart B, Class A EN 55022:1998 Class A EN 55024:1998 Industry Canada Class A	UL 60950-1:2003 For indoor use only CSA C22.2 No. 60950-1:2003 EN 60950-1:2001 IEC 60950-1:2001

Transceiver	RF Standards	Notes
4830 (LXE Model No.) LXE 2.4GHz CF with Type II PCMCIA Adapter Card	FCC Part 15 FCC Bulletin OET-65 EN 300 328 IC-RSS 210 IC-RSS 102	Unlicensed Operation Unlicensed Operation Requires License for Outdoor Use
4831 (LXE Model No.) LXE 5GHz CF with Type II PCMCIA Adapter Card	FCC Part 15 FCC Bulletin OET-65 EN 300 328 EN 301 893 IC-RSS 210 IC-RSS 102	Unlicensed Operation Unlicensed Operation Requires License for Outdoor Use

Important: This symbol is placed on the product to remind users to dispose of Waste Electrical and Electronic Equipment (WEEE) appropriately, per Directive 2002-96-EC. In most areas, this product can be recycled, reclaimed and re-used when properly discarded. Do not discard labeled units with trash. For information about proper disposal, contact LXE through your local sales representative, or visit www.lxe.com.

Lithium Battery Safety Statement

Caution:
Lithium battery inside. Danger of explosion if battery is incorrectly replaced. Replace only with same or equivalent type recommended by battery manufacturer. (US)

Attention:
Contient une pile de lithium. Risque d'explosion dans le cas où la pile ne serait pas correctement remplacée. Remplacer uniquement avec une pile semblable ou equivalente au type de pile recommandé par le fabricant. (FR)

Forsigtig:
Indeholder lithiumbattterier. Risiko for eksplosion, hvis batteriet udskiftes forkert. Må kun udskiftes med samme eller tilsvarende type, som anbefalet af fabikanten. (DK)

Varoitus:
Tämä tuote käyttää laservaloa. Skannerissa on jokin seuraavista tarroista. Lue Huomio-kohta. (FI)

Vorsicht:
Enthält Lithium-Batterie. Bei unsachgemäßem Ersatz besteht Explosionsgefahr. Nur durch gleichen oder vom Hersteller empfohlenen Typ ersetzen. (DE)

Attenzione:
Batteria al litio. Pericolo di esplosione qualora la batteria venga sostituita in maniera scorretta. Sostituire solo con lo stesso tipo o equivalente consigliato per il fabbricante. (IT)

Atenção:
Contém pilha de lítio. Há perigo de explosão no caso de uma substituição incorreta. Substitua somente pelo mesmo tipo, ou equivalente, recomendado pelo fabricante. (PT)

Varning:
Innehåller litiumbatteri. Fara för explosion om batteriet är felaktigt placerat eller av fel typ. Använd endast samma eller motsvarande typ batterier rekommenderade av tillverkaren. (SE)

Advarsel:
Innmontert Lithium batteri. Eksplosjonsfare ved feil montering av batteri. Benytt kun batteri anbefalt av produsent. (NO)

Cuidado:
Pila de litio adentro. Peligro de explosión si la pila se reemplaza incorrectamente. Reemplace solamente con el mismo tipo o equivalente recomendado por el fabricante. (ES)

Oppassen:
Bevat Lithium-batterij. Incorrrecte plaatsing van batterij kan leiden tot explosiegevaar. Alleen vervangen door hetzelfde of door fabrikant aanbevolen gelijkwaardig type. (NL)

Lithium Battery Safety Statement

Προσοχή: Υπάρχει μπαταρία από λίθιο εσωτερικά. Υπάρχει κίνδυνος έκρηξης εάν η μπαταρία αντικατασταθεί με λανθασμένο τρόπο. Αντικαταστήστε μόνο με τον ίδιο ή ισοδύναμο τύπο που συνιστάται από τον κατασκευαστή. (GR)	**주의:** 리튬 배터리 내부. 배터리가 잘못 설치되었을 경우 폭발의 위험이 있습니다. 동일한 배터리, 또는 배터리 제조업체가 권장하는 배터리로 교체하십시오. (KR)
注意: リチウム電池が入っています。間違った種類の電池を使用すると、破裂する恐れがあります。同じ電池、または電池製造元が推奨する同等の電池を使用してください。 (JP)	**小心:** 内装锂电池。如电池更换不当，则有发生爆炸的危险。只能用电池制造商推荐的相同或同等电池进行更换。 (CN)
Dikkat: İçinde lityum bataryası bulunur. Bataryanın yanlış değiştirilmesi patlama tehlikesi yaratır. Aynısıyla veya üreticinin önerdiği eşdeğer tiple değiştirin. (TR)	

Legend:

Chinese	CN	Italian	IT
Danish	DK	Japanese	JP
Dutch	NL	Korean	KR
English	US	Norwegian	NO
Finnish	FI	Portuguese	PT
French	FR	Spanish	ES
German	DE	Swedish	SE
Greek	GR	Turkish	TR

A/C Power Supply Safety Statement – VX3X
Output Rated 12 – 80 VDC, Minimum 15W.

The LXE-approved AC Power Adapter is only intended for use in a 25ºC (77ºF) maximum ambient temperature environment.

Optional A/C Power Supply:
Outside North America, this unit is intended for use with an IEC certified ITE power supply with output rated as stated at the top of this page. (US)

Alimentation c.a. optionnelle:
Hors de l'Amérique du Nord, cette unité est conçue pour être utilisée avec une alimentation ITE certifiée CEI de sortie nominale indiquée au haut de cette page. (FR)

Valgfrit vekselstrømforsygning
Udenfor Nord Amerika er denne enhed udstattet med en IEC (international elektronisk Kommission) udfærdiget med en ITE strømforsygning med strømudgang som fastslået på denne sides begyndelse. (DK)

Vaihtoehtoinen vaihtovirran syöttölaite:
Pohjois-Amerikan ulkopuolella tämä laite on tarkoitettu käytettäväksi sellaisen IEC:n sertifioiman ITE-tehonsyöttölaitteen kanssa, jonka antoteho on tämän sivun yläosassa esitetyn mukainen. (FI)

Optionales Netzteil (Wechselstrom)
Außerhalb Nordamerikas sollte diese Einheit über ein der IEC-Norm entsprechendes ITE-Netzteil gespeist werden, und zwar mit einer wie oben auf dieser Seite genannten Ausspeisung. (DE)

Προαιρετική Τροφοδοσία Συνεχούς Ρεύματος
Εκτός Β. Αμερικής, η μονάδα αυτή προορίζεται για χρήση με ένα τροφοδοτικό ITE πιστοποιημένο κατά IEC με ονομαστική ισχύ όπως δηλώνεται στην αρχή της σελίδας. (GR)

Alimentazione opzionale a corrente alternata:
Al di fuori dei paesi dell'America del nord, l'unità deve essere impiegata con un dispositivo d'alimentazione per attrezzature informatiche approvato dalla IEC la cui potenza nominale sia pari a quella indicata all'inizio della pagina. (IT)

Vekselstrømforsyning (ekstrautstyr):
Utenfor Nord-Amerika skal dette produktet brukes med en IEC-sertifisert ITE-strømforsyning med klassifisert effekt som angitt øverst på denne siden. (NO)

Fornecimento opcional de CA:
Fora dos EUA, esta unidade destina-se a ser usada com dispositivos de fornecimento de corrente ITE com certificação IEC, com a capacidade indicada no topo desta página. (PT)

Suministro optativo de corriente alterna
Fuera de América del Norte, esta unidad se debe utilizar con un alimentador ITE homologado por la IEC (comisión electrotécnica internacional) con una salida que tenga la calificación que figura en la parte superior de esta página. (ES)

Valfri A/C Strömförsörjning
Utanför Nordamerika är det meningen att denna enheten används med en IEC-certifierad ITE-strömförsörjare med den uteffekt som anges längst uppe på den här sidan. (SE)

İsteğe Bağlı A/C Güç Kaynağı:
Kuzey Amerika dışında, bu ünite, çıkış sınıflandırması bu sayfanın başında belirtilen IEC sertifikalı bir ITE güç kaynağı ile birlikte kullanılmak üzere tasarlanmıştır. (TR)

Updated 10/01/2001

Legend: Danish – DK; English – US; Finnish – FI; French- - FR; German – DE; Greek – GR; Italian – IT; Norwegian – NO; Portuguese – PT; Spanish – ES; Swedish – SE; Turkish – TR.

Vehicle Power Supply Connection Safety Statement

Vehicle Power Supply Connection:
If the supply connection is made directly to the battery, a 2A slow-blow fuse should be installed in the positive lead within 5 inches (12.7 cm.) of the battery positive (+) terminal. (US)

Raccordement de l'alimentation du véhicule
Si l'alimentation est raccordée directement à la batterie, un fusible à action retardée de 2A doit être installé sur le câble positif à moins de 12,7 cm de la borne positive (+) de la batterie. (FR)

EL forsyning af køretøjet.
Er forsyningsforbindelsen direkte tilknyttet til batteriet og og tilsluttet til den positive part indenfor 12,7 cm (+ delen). vil der være en langsom tændelse af 2 ampere. (DK)

Kytkentä ajoneuvon virtalähteeseen
Jos virtaa otetaan suoraan akusta, 2 ampeerin hidas sulake on asennettava positiiviseen johtoon enintään 12 cm:n etäisyydelle akun positiivisesta (+) navasta. (FI)

Anschluss an Fahrzeugbatterie
Bei direktem Anschluss an die Fahrzeugbatterie sollte eine träge 2A-Sicherung in die positive Leitung zwischengeschaltet werden, und zwar nicht weiter als ca. 13 cm von der positiven (+) Batterieklemme entfernt. (DE)

Σύνδεση Τροφοδοτικού Ισχύος Οχήματος
Αν η σύνδεση του τροφοδοτικού γίνει κατευθείαν στη μπαταρία, μια ασφάλεια βραδείας τήξης των 2A θα πρέπει να τοποθετηθεί στο θετικό καλώδιο εντός 5 ιντσών (12,7 εκ.) του θετικού (+) ακροδέκτη της μπαταρίας. (GR)

Collegamento dell'alimentazione del veicolo
Se il collegamento dell'alimentazione viene stabilito direttamente con la batteria, è necessario installare un fusibile ad azione lenta da 2 A nel conduttore positivo a meno di 5 in. (12,7 cm) dal terminale positivo (+) della batteria. (IT)

Tilkople strømforsyningen til kjøretøyet
Hvis strømforsyningen koples direkte til batteriet, skal det installeres en 2 A treg sikring i den positive ledningen innen 12,7 cm fra plusspolen (+) på batteriet. (NO)

Ligação do fornecimento de corrente do veículo
Se a ligação de fornecimento de corrente for ligada directamente à bateria, deve instalar-se um fusível de 2A no terminal positivo, a 12,7 cm. do terminal positivo (+) da bateria. (PT)

Conexión de suministro eléctrico para el vehículo
Si el suministro eléctrico se proporciona directamente a la batería, se debe instalar un fusible de retardo de 2 A en el conductor positivo, como máximo a 12,7 cm (5 pulgadas) del terminal positivo (+). (ES)

Fordonets strömförsörjningskoppling
Om strömkopplingen görs direkt till batteriet, måste en 2A-säkring installeras i den positivt laddade ledningen inom 12.7 cm från batteriets pluspol (+). (SE)

Taşıt Güç Kaynağı Bağlantısı
Kaynak bağlantısı doğrudan aküye yapılırsa, pozitif bağlantı kablosu üzerinde akünün pozitif (+) kutbuna 12.7 cm mesafede 2A'lık yavaş atan bir sigorta monte edilmelidir. (TR)

Legend: Danish – DK; English – US; Finnish – FI; French- - FR; German – DE; Greek – GR; Italian – IT; Norwegian – NO; Portuguese – PT; Spanish – ES; Swedish – SE; Turkish – TR.

Updated 02/10/2004

Revision History

Revision A, Initial Release: November 2006

Revision B: November 2007

Section	Explanation
Entire Manual	Updated specific references to Microsoft Windows CE .NET to generic references to Microsoft Windows CE to reflect the availability of either Windows CE .NET or CE 5.0 operating systems on the VX3X. Added Bluetooth information and instruction.
Overview	Revised section.
Components	Revised section for endcap options.
Accessories	Updated accessories listing.
Connect Serial Barcode Scanner	Revised section.
Strain Relief Cable Clamps	Added new section.
AppLock and the VX3X	Revised section.
Connect Serial Printer or PC	Revised section.
USB-C Port	Revised section.
USB-H Port	Added new section.
Connect External Headset	Revised section.
Connect Antenna.	Added new section
Vehicle 12-80VDC Power Connection	Revised graphics.
Appendix B – Regulatory Notices and Safety Information	Revised “R&TTE Directive Requirements”.

Revision C: May 2008

Section	Explanation
Accessories	Revised accessories listing.
Identifying the VX3X Computer	Added new section.

Revision D: September 2008

Section	Explanation
Appendix B Regulatory Notices and Safety Information	Update approvals for 802.11 a/b/g radio. Remove Summit Declaration of Compliance for consistency.

Revision E: April 2009

Section	Explanation
Multi Application AppLock	Clarified launched vs. available applications.
Accessories	Revised accessories listing.

Index

Numeric

2nd key function 12

A

Aim Barcode Scanner 47
Alt key function 12
AppLock 9
Audio Volume settings 44

B

Backup Battery 17
Barcode Scanner 29
Barcode scanner data entry 46
Battery, Backup, Lithium 17
Beam, Long Range Scanner 47
Bluetooth printers and scanners 49
Bottom Mounting Bracket 23
Bracket
  How To 23
  Tools Required 21

C

Caps mode function 13
Cleaning
  Display 43
Color Codes, Wiring 39
Connection
  COM1 29
  COM3 ....31, 32, 33
  External Speakers 34
Control Panel, Windows CE 8
Controls, Physical 41
CPU 1
Ctrl key function 12

D

Data entry, How To 45
Display 8
  adjust contrast 42
  Cleaning 43
  Features 42
  Pixels 8, 42
Display Contrast 42
Document Conventions 3

E

End user switching
  Touch 9
Enter Data, How To 45
Enter key function 12
Environmental Specifications 3
External Speakers 34

F

Features 1
Flash Memory 1
Function
  2nd Key 12
  Alt Key 12
  Caps Mode 13
  Ctrl Key 12
  Enter Key 12
  Shft Key 12
  Spc Key 12

G

Getting Started 4
Good Scan LED 30

H

Headphone Jack 34
How To
  Aim the Scan Beam 47
  Connect 12-80VDC Vehicle Power 39
  Connect Barcode Scanner 29
  Connect External Speakers 34
  Connect Serial Printer 31, 32, 33
  Install Vehicle Mounting Brackets 21
  Keyboard data entry 46

I

Input Cable, Max Temp rating 39
Install

External Speakers....34, 35
Mounting Brackets, Vehicle 21
Optional Power Supply....37
Printer or PC 31, 32, 33
Scanner....29

K

Key Map....51
TN3270 keypads....56
Key Maps, Custom....13
Keyboard data entry 46
keyboard shortcuts....15
Keymaps....51
Keypad Shortcuts....13

L

Laser Aperture....30
Laser barcode scanner warnings....45
LEDs
2nd function....14
ALT function 14
CAPS function 14
CTRL function 14
on keypads,location....14
SHFT function 14
STAT function 14

M

Manuals 18
Maximum overcurrent protection....37
Measurement,Torque....22
Mode Key Functions 13

N

Nine-pin D-shell female connector
and the Scanner....29
for printer or PC....31, 32, 33

O

Operating Temperature....3
Overcurrent protection....37

P

Pen Stylus....42, 46
Polarity 39
Power Button....41
Printer 31, 32, 33
Procedure
Mounting Brackets....23
Protective Film 28

Q

Quick Start Instructions....4

S

Scanner
Nine-pin D-shell female connector 29
Scanner data entry 46
Scanner Installation 29
Scanning distance 47
Serial Printer....31, 32, 33
Shielded Cable
and the PC or printer....31, 32, 33
Shielded Cable Requirement 29
Shift key function 12
Silicon Controller Rectifiers (SCR's) 39
Sizing of electrical connectors for use with 22AWG
conductors 39
Space key function 12
Speaker Volume 44
using keypad 44
using touchscreen....44
Specifications
Environmental....3
Stylus 42, 46
Stylus Clip 28
Stylus Data Entry....46
Successful Scan indicators 47
SVGA graphics modes 8

T

Terminal Emulator List 1
Thin Film Transistor (TFT) Display....8
Tools Required
Phillips No. 1 Screwdriver....21
Torque Wrench 22
Torque Wrench....21
Touch Screen....42, 46
Touch Screen and Keypad Shortcuts....13
Touchscreen
Data Entry....46
Finger or Stylus....46
Trigger....30

U

Unsuccessful Scan indicators 47

V

Vehicle Mounting Bracket, Installation Procedure .21
Vehicle Power
  12V to 80V DC 17
  External Power Supply 37
View
  Display 42
Voice data 48
Volume
  adjust audio volume 44
VX3Plus Reference Guide 2
VX3X Reference Guide 2

W

Warning
  Laser light 45
Windows CE
  Control Panel 8
  Help Screens 8
Windows CE online Help 8
Wiring Color Codes 39